

PROJECT LOCATION

Contract Drawings For

City of Lee's Summit, MO

Water Utilities Facility & Parking Lot Expansion Final Development Plan

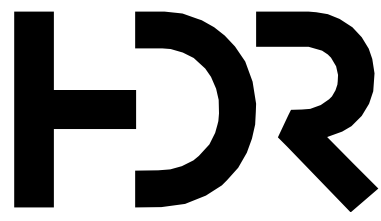
Project No. 10417754
1200 SE Hamblen Rd, Lee's Summit, MO 64081

Date: 03/07/2025

PRELIMINARY - NOT FOR CONSTRUCTION

Autodesk Docs:/10417754_LSN0_WUF_Expansion_Study_2024/10417754_GENERAL_2024.rvt
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A/C A/E A AB ABAN ABC ABT AC ACK ACP ACST AD ADDL ADH ADJ AF AFF AFG AGGR AI A/C ALIG ALT ALUM AM AMB ANC AO AP APRX APVD ARCH ASSY AT ATC ATM AUX AVE AVG AWG AWT B TO B BAL BBB BC BD BE BF BITUM BKG BL BLDG BLK BLKG BM BOC BOD BOG BOL BOP BOR BOT BOU BP BRG BRGP BRKT BS BTU BTW BTWLD BU BUR BW BYP CTOC C&G C CAB CAP CAT CAV CB CCB CCW CDF CE CER CF CFL CHBD CHD CHFR CHH CI CIP CIPB CIRC CJ CKT CL CLG CLKG CLR CMH CMP CMU CO COL COM COMB COMM COMP CON	CONC CONN CONST CONT COOR CORR CP CPLG CRL CSC CSK CSS CT CTJ CTR CTRL CVT CU CW CY d D DB DBA DBL DC DEG DEG C DEG F DEMO DEP DEPT DET DI DIA DIAG DIFF DIM DISCH DIST DIV DL DMJ DMPF DN DO DP DPDT DPST DS DT DUP DWG DWL DWR E EA EC ECC ED EDB EE EF EFF EHH EIFS EJ EL ELEC EMBD EMER ENH ENCL ENGR ENTR EOP EQ EQUIV ES ESEW EST EW EWC EWEF EWTB EXC EXH EXP EXST EXT F TO F F&B FAB FB FBD FBG FBM FBO FC FCA FD FDC FDR FDTN FE FEC FES FEXT FF FG FH FIG FIN FJT FL	FV FLEX FLG FLOR FLR FLS FN FO FOB FOC FOF FOM FOS FOT FPT FR FRP FRTM FS FT FTG FUR FURN FUT FV FW FWD FWE FXTR G GA GAL GALV GB GC GD GEN GFCI GFMU GG GJ GL GLB GND GP GR GRTG GSB GT GVL GW GWB GYP H HB HBD HC HD HDR HDW HEX HGR HH HID HM HORIZ HP HPC HPS HPT HR HS HSS HT HTG HV HVAC HWD HWL HYD HZ ID IE IF IH IMP IN INC INF INSTR INSUL INT INTR INV IPS IPT IR IRR ISO JB JCT JF JST JT K KB KMIL KO KSI KILOWATT	L LAD LAM LATL LB LCTB LDG LDR LE LF LG LH LIN LIQ LLH LLV LMLU LNG LOC LP LPS LR LT LTD LTG LTL LTNG LV LVL LVR LW LWC LWL MA MACH MAINT MAN MATL MAX MB MBR MC MCB MCJ MDMJ MECH MED MFR MH MIN MIR MISC MJ ML MLO MMB MO MOD MON MPT MROWB MS MSL MT MU MULL MV MW N NA NAT NC NEG NF NIC NO NOM NPS NPT NS NTS NWL O TO O OA OC OCPD OD OED OF OFCI OFOI OG OH OPNG OPP OPT OR ORD ORIG OVFL OVHG OZ P PA PAR PB PBD PC PCC PCF PCT PE PED	PEN PERF PERM PERP PF PFMU PH PI PKG PL PLAS PLAT PLBG PLF PNEU POL PP PRC PREF PREFAB PRELIM PREP PRES PRI PROP PROT PS PSF PSI PSIA PSIG PREST PT PTN PVC PVMT PWD PWJ PZ Q QT QTR QTY QUAL R&R R&S RAD RA RB RCPT RD REC RECD RECT RED REF REINF REM REQD RESIL RET REV RF RFG RFL RGH RGS RGS-PVC RH RL RLFA RND RNG RO ROW RPM RR RSP RT RVT RY S SA SAMU SAN SB SC SCH SCHEM SCN SE SEC SECT SEP SF SG SH SHT SHTG SIL SIM SJ SLD SLV SMLS SOG SP SPA SPEC SPLY SPST SPT SQ SR	SS SST ST STA STD STIF STIR STL STOR STR SUB SUC SUSP SY SYM SYMM SYN SYS T&B T&G T TA TAN TBM TCE TEF TEMP THD THK TKBD TOB TOD TOF TOG TOL TOM TOP TOPO TOS TOW TP TPD TPG TR TRANS TRD TYP U UG ULT UNFN UNO UTIL V VA VAC VAR VB VC VCP VCT VEL VENT VERT VERTS VG VIF VIN VOL VPC VPI VPT VS VTR VWC W/ W/O W WB WC WD WF WG WH WI WL WLD WM WP WS WSCT WT WTHP WWF XP XS XSECT XXS YH YS	SERVICE SINK STAINLESS STEEL STEEL STATION STANDARD STIFFENER STIRRUP STEEL STORAGE STRUCTURAL, STRAIGHT SUBSTITUTE SUCTION SUSPENDED SQUARE YARD SYMBOL SYMMETRICAL SYNTHETIC SYSTEM TOP AND BOTTOM TONGUE AND GROOVE TILE, TREAD TOILET ACCESSORY, TEMPERED AIR TANGENT TEMPORARY BENCHMARK TEMPORARY CONSTRUCTION EASEMENT TROWELED EPOXY FLOORING TEMPORARY, TEMPERATURE THREAD THICK THRESH THRESHOLD TACK BOARD TOP OF BOLT, TOP OF BANK, TOP OF BEAM, TOP OF BERM TOP OF CURB, TOP OF CONCRETE TOP OF DUCT TOP OF FOOTING TOP OF GRATING TOLERANCE, TOP OF LEDGER TOP OF MASONRY TOP OF PLATE TOPOGRAPHY TOP OF SLAB, TOP OF STEEL, TOE OF SLOPE TOP OF WALL TOILET PARTITION, TELEPHONE POLE, TOE PLATE, TRAP PRIMER TOILET PAPER DISPENSER TOPPING, THROUGH PLATE GIRDER TRANSOM TRANSITION TRENCH DRAIN TYPICAL U UG ULT UNFN UNO UTIL V VENT, VELOCITY, VOLT VOLT AMPERE VACUUM VARNISH, VARIABLE, VOLT AMPERES REACTIVE VAPOR BARRIER, VINYL BASE, VALVE BOX VERTICAL CURVE VITRIFIED CLAY PIPE VINYL COMPOSITION TILE, VERTICAL CENTERLINE VELOCITY VENTILATION VERTICAL VERTICAL REINFORCING VERTICAL GRAIN VERIFY IN FIELD VINYL VOLUME VERTICAL POINT OF CURVATURE VERTICAL POINT OF INTERSECTION VERTICAL POINT OF TANGENCY VERSUS, VAPOR SEAL VENT THROUGH ROOF VINYL WALL COVERING W/ WITHOUT WATT, WEST, WIDE, WINDOW, WIRE, WIDE FLANGE BEAM WOOD BASE WATER CLOSET, WATER COLUMN WOOD, WIDTH WIDE FLANGE, WASH FOUNTAIN WIRE GLASS, WATER GAGE WALL HYDRANT, WEEP HOLE WROUGHT IRON WATER LEVEL WELDED WIRE MESH WEATHERPROOF WATERSTOP, WATER SURFACE WAINSCOT WEIGHT, WATER TIGHT WATERPROOF, WORKING POINT WELDED WIRE FABRIC XP EXPLOSION-PROOF EXTRA STRONG CROSS SECTION DOUBLE EXTRA STRONG YH YARD HYDRANT YIELD STRENGTH	
							<div>GENERAL NOTES</div> <div>1. THESE ABBREVIATIONS APPLY TO THE ENTIRE SET OF CONTRACT DRAWINGS.</div> <div>2. LISTING OF ABBREVIATIONS DOES NOT IMPLY THAT ALL ABBREVIATIONS ARE USED IN THE CONTRACT DRAWINGS.</div> <div>3. ABBREVIATIONS SHOWN ON THIS SHEET INCLUDE VARIATIONS OF A WORD. FOR EXAMPLE, "MOD" MAY MEAN MODIFY OR MODIFICATION, "INC" MAY MEAN INCLUDED OR INCLUDING, AND "REINF" MAY MEAN REINFORCE OR REINFORCING.</div> <div>4. SEE INSTRUMENTATION AND GENERAL LEGEND SHEETS FOR PROJECT-SPECIFIC EQUIPMENT AND PIPING SYSTEM ABBREVIATIONS.</div>



HDR
MISSOURI CERTIFICATE OF
AUTHORITY #000856
10450 HOLMES ROAD, SUITE 600
KANSAS CITY, MO 64131
816-360-2700

03/07/2025 FINAL DEVELOPMENT PLAN

ISSUE DATE DESCRIPTION

PROJECT MANAGER
CIVIL K. PRINDS
ARCHITECTURAL M. WIEBELHAUS
MECHANICAL E. BUTTMAN
MECHANICAL M. WARRICK

PROJECT NUMBER 10417754

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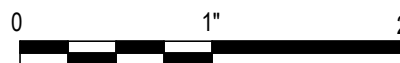


City of Lee's Summit, MO
Water Utilities Facility & Parking Lot
Expansion

ABBREVIATIONS

FILE NAME
SCALE

File Name
12" = 1'-0"



SHEET
00G002

1

MATERIALS IN PLAN/SECTION

FILLED REGIONS - MATERIALS

"MATERIAL" FILLED REGIONS ARE DRAFTING HATCH PATTERNS THAT REPRESENTS AN ACTUAL MATERIAL OR PRODUCT.

MATERIAL - BITUMINOUS PAVING (ASPHALT)

MATERIAL - CONCRETE - ARCHITECTURE PRECAST WALL PANEL

MATERIAL - CONCRETE - ARCHITECTURAL PRECAST WALL PANEL

MATERIAL - CONCRETE - CAST-IN-PLACE

MATERIAL - CONCRETE - GLASS FIBER REINFORCED

MATERIAL - CONCRETE - LIGHTWEIGHT

MATERIAL - CONCRETE - STRUCTURAL

MATERIAL - EFIS

MATERIAL - FILL - COURSE - CRUSHED STONE

MATERIAL - FILL - FINE - GRAVEL

MATERIAL - FILL - FINE - SAND

MATERIAL - FILL - MEDIUM - GRAVEL

MATERIAL - FILTER POINT MAT - PLAN

MATERIAL - FIREPROOFING - MINERAL WOOL

MATERIAL - FIREPROOFING - SEALANT

MATERIAL - FIREPROOFING - SPRAY-APPLIED

MATERIAL - FLOOR - CARPET - STYLE 1

MATERIAL - FLOOR - CARPET - STYLE 2

MATERIAL - FLOOR - TERRAZZO - STYLE 1

MATERIAL - FLOOR - TERRAZZO - STYLE 2

MATERIAL - GLAZING

MATERIAL - GLAZING - SPANDREL

MATERIAL GRATING - PLAN

MATERIAL GRATING - SECTION

MATERIAL - GROUT

MATERIAL - GYPSUM - PLASTER

MATERIAL - GYPSUM - WALLBOARD

MATERIAL - INSULATION - BATTING - SECTION

MATERIAL - INSULATION - RIGID FOAM

MATERIAL - MASONRY - BRICK

MATERIAL - MASONRY - CMU

MATERIAL - MASONRY - DOLMITE

MATERIAL - MASONRY - MORTAR

MATERIAL - MASONRY - STRUCTURAL CLAY TILE

MATERIAL - METAL - ALUMINUM

MATERIAL - METAL - CHECKERED PLATE - PLAN

MATERIAL - METAL - ORNAMENTAL

MATERIAL - METAL - STEEL

MATERIAL - PLASTER STUCCO

MATERIAL - PLASTIC

MATERIAL - RESILIENT TILE

MATERIAL - RIPRAP - PLAN AND/OR SECTION

MATERIAL - SEALANT - ACOUSTICAL

MATERIAL - SEALANT - FIRE SEALANT

MATERIAL - SOD - SECTION

FILLED REGIONS - GRAPHICS

GRAPHIC FILLED REGIONS ARE DRAFTING HATCH PATTERNS THAT ARE A SIMPLE GRAPHIC PATTERN AND DOES NOT REPRESENT A MATERIAL OR PRODUCT.

GRAPHIC - CONTRACT LIMIT - NOT-IN-CONTRACT

GRAPHIC - DEMOLITION

FILLED REGIONS - SURFACE

SURFACE FILLED REGIONS ARE MODELING HATCH PATTERNS THAT REPRESENT A MATERIAL OR PRODUCT AS REPRESENTED ON A VERTICAL OR HORIZONTAL SURFACE.

Ceilings

CEILING TILES

SURFACE - CEILING TILE - 24" x 24"

SURFACE - CEILING TILE - 24" x 24" - DEMO

SURFACE - CEILING TILE - 24" x 48"

SURFACE - CEILING TILE - 24" x 48" - DEMO

SURFACE - CEILING TILE - 24" x 72"

SURFACE - CEILING TILE - 24" x 72" - DEMO

SURFACE - CEILING TILE - 48" x 48"

SURFACE - CEILING TILE - 48" x 48" - DEMO

SURFACE - CEILING - ACOUSTICAL TILE - SECTION

MASONRY

SURFACE - MASONRY - BRICK - MODULAR - RUNNING BOND

SURFACE - MASONRY - CMU - 8" x 16" - RUNNING BOND

SURFACE - MASONRY - CMU - 8" x 16" - STACKED BOND

METALS

SURFACE - ENTRANCE GRID - 65 MM

GENERAL SYMBOLOGY

ARROW INDICATES DIRECTION OF TRUE NORTH

LINE INDICATES DIRECTION OF PLAN NORTH

NORTH ARROW

MATCH LINE

SEE XX/XXXXXXXXX

MATCH LINE

PLAN

X

1/4" = 1'-0"

PLAN TITLE ON SHEET

NOTE 1

X

VIEW TITLE

1/4" = 1'-0"

NOTE 2

DETAIL

FOR REFERENCING DETAILS INCLUDED IN DRAWING SET.

1. DETAIL NUMBER

2. SHEET WHERE DETAIL IS LOCATED *

SECTION

1. SECTION LETTER

2. SHEET WHERE SECTION VIEW IS FIRST CUT *

ELEVATION

1. ELEVATION IDENTIFICATION NUMBER

2. SHEET WHERE POINT OF VIEW MARKER CAN BE FOUND *

SECTION, DETAIL, ELEVATION TITLE

DETAIL NUMBER

X

SHEET WHERE DETAIL IS LOCATED *

XXX

DETAIL CALLOUT

FOR REFERENCING DETAILS INCLUDED IN DRAWING SET

ARROW INDICATES DIRECTION OF SECTION CUT

X

SECTION LETTER

SHEET WHERE SECTION IS LOCATED

XXX

FULL BUILDING SECTION CUT MARKER

SECTION LETTER

FLAG INDICATES DIRECTION OF SECTION CUT

X

SHEET WHERE SECTION IS LOCATED

XXX

SECTION CUT MARKER

ARROW INDICATES POINT OF VIEW

X

ELEVATION NUMBER

INTERIOR

XXX

EXTERIOR

X

SHEET WHERE ELEVATION IS LOCATED *

XXX

SINGLE ELEVATION OR PHOTO MARKER

ARROW INDICATES POINT OF VIEW ELEVATION

X

ELEVATION NUMBER

INDICATES SHEET WHERE ELEVATION IS LOCATED

XXX

MULTIPLE ELEVATION OR PHOTO MARKER

TARGET ELEVATION

TARGET ELEVATION MARKER

GENERAL TAGGING

ROOM/SPACE NAME

XX-XX

ROOM OR SPACE

DOOR

XXX

DOOR

DOOR MARK

XXX

XXX

XXXX

XXXX

FIRE DOOR/STAIR

A

NEW COLUMN GRID BUBBLE

A

EXISTING COLUMN GRID BUBBLE

X

WALL TYPE

X

CURTAIN WALL

X

WINDOW TYPE

X

ACCESSORY, FURNITURE, AND MISCELLANEOUS EQUIPMENT IDENTIFIER

X

LOUVER TYPE

###

SHEET KEYNOTE

##

REVISION DELTA

EQUIPMENT IDENTIFICATION

NOTE: THE BELOW EQUIPMENT TAG IS AN EXAMPLE ONLY. MODIFY FIELDS AS REQUIRED PER THE PROJECT STANDARD.

FIGURE

NPWP2023

SERVICE ABBREVIATION

AREA DESIGNATION

EQUIPMENT ABBREVIATION

BUILDING OR STRUCTURE NUMBER

EQUIPMENT NUMBER

EXAMPLE

INDICATES NON-POTABLE WATER

INDICATES PUMP

BUILDING 20

PUMP 23

PIPING

NOTE: THE BELOW PIPE TAG IS AN EXAMPLE ONLY. MODIFY FIELDS AS REQUIRED PER THE PROJECT STANDARD.

FIGURE

36"-PLE

LINE SIZE

36"

SERVICE

PLANT EFFLUENT

EXAMPLE

INDICATES NON-POTABLE WATER

INDICATES PUMP

BUILDING 20

PUMP 23

PIPING (ALTERNATE)

FIGURE

36"-PLE

LINE SIZE

36"

SERVICE

PLANT EFFLUENT

EXAMPLE

INDICATES NON-POTABLE WATER

INDICATES PUMP

BUILDING 20

PUMP 23

GENERAL LINE STYLES

4-HOUR FIRE RATED WALL

3-HOUR FIRE RATED WALL

2-HOUR FIRE RATED WALL

1-HOUR FIRE RATED WALL

COLUMN GRID LINE

CENTERLINE

CONTRACT LIMIT

ELEVATION LINE

PROPERTY LINE

SHEET NAMING CONVENTION

EXAMPLE:

00

GENERAL

01

SITE PLANNING

10

MAINTENANCE BAY

SINGLE DISCIPLINE DESIGNATOR & DISCIPLINE ORDER*

G

GENERAL

X

DEMOLITION/HAZARDOUS MATERIAL

V

SURVEYING/MAPPING

B

GEOTECHNICAL

L

CIVIL

S

LANDSCAPE

A

STRUCTURAL

I

ARCHITECTURAL

Q

INTERIORS

F

EQUIPMENT

P

FIRE PROTECTION

D

PLUMBING

M

PROCESS

E

MECHANICAL

W

ELECTRICAL

T

DISTRIBUTED ENERGY

R

TELECOMMUNICATIONS

U

RESOURCE

Y

UNIVERSAL/OTHER DISCIPLINES

<

[illegible]

PROJECT MANAGER	K. PRINDS
CIVIL	M. WIEBELHAUS
ARCHITECTURAL	E. BUTTMAN
MECHANICAL	M. WARRICK
PROJECT NUMBER	10417754

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**City of Lee's Summit, MO
Water Utilities Facility & Parking Lot
Expansion**

GENERAL LEGEND

FILE NAME | FileName
SCALE | 12" = 1'-0"
0 1" 2'

SHEET
00G003

1	2	3	4	5	6	7	8
PIPING SYSTEMS	PIPING SYMBOLOGY	HVAC SYMBOLOGY		TEMPERATURE CONTROL DIAGRAM SYMBOLOGY		ABBREVIATIONS	
<div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><div>-----</div><di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[illegible]

PROJECT MANAGER	K. PRINDS
CIVIL	M. WIEBELHAUS
ARCHITECTURAL	E. BUTTMAN
MECHANICAL	M. WARRICK
PROJECT NUMBER	10417754

**PRELIMINARY
NOT FOR
CONSTRUCTION OR
RECORDING**




**City of Lee's Summit, MO
Water Utilities Facility & Parking Lot
Expansion**

MECHANICAL LEGEND

FILE NAME | FileName

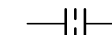

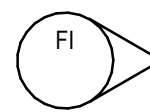
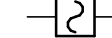

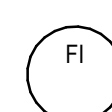
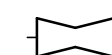
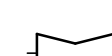
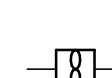


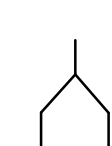
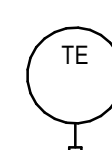

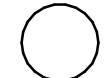


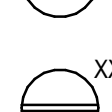






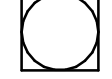
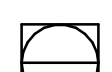

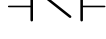
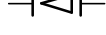
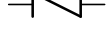


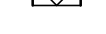
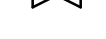

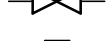
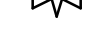
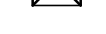
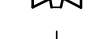



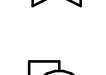
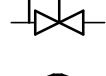
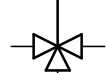
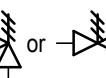
SCALE | 12" = 1'-0"

0 1" 2'

A horizontal graphic scale bar. It starts with a black segment labeled '0'. This is followed by a white segment, then a black segment labeled '1"'. This pattern of alternating black and white segments continues. The bar ends with a black segment labeled '2'.

SHEET
00G005

Autodesk Docs://10417754_LSMO_WUF_Expansion_Study_2024/10417754_GENERAL_2024.m
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PRIMARY ELEMENT SYMBOLOGY	INSTRUMENT SYMBOLOGY	VALVES	INSTRUMENT IDENTIFICATION LETTERS		ABBREVIATIONS	MISCELLANEOUS SYMBOLOGY	GENERAL NOTES																																																																																																																																																																					
<div><div></div>ORIFICE PLATE</div> <div><div></div>PITOT TUBE OR ANNUBAR</div> <div><div></div>ROTOMETER</div> <div><div></div>SONIC OR ULTRASONIC FLOWMETER</div> <div><div></div>MAGNETIC FLOWMETER</div> <div><div></div>MASS DISPERSION FLOWMETER</div> <div><div></div>FLUME</div> <div><div></div>WEIR</div> <div><div></div>PROPELLER OR TURBINE METER</div> <div><div></div>VENTURI TUBE</div> <div><div></div>VENTURI FLUME</div> <div><div></div>FLOAT SWITCH</div> <div><div></div>TEMPERATURE ELEMENT WITH THERMOWELL</div> <div><div></div>SIGHT FLOW GLASS</div>	<div><div></div>LOCALLY MOUNTED FIELD INSTRUMENTATION</div> <div><div></div>MOUNTED ON PANEL FRONT</div> <div><div></div>MOUNTED INSIDE PANEL</div> <div><div></div>FRONT PANEL MOUNTED ON AUXILIARY PANEL (SUBSCRIPT INDICATES PANEL)</div> <div><div></div>MOUNTED INSIDE AUXILIARY PANEL</div> <div><div></div>PILOT LIGHT</div> <div><div></div>INSTRUMENT FUNCTIONS SHARING COMMON HOUSING</div> <div><div></div>COMPLEX INTERLOCK AS DEFINED IN CONTROL DIAGRAM OR IN SPECIFICATIONS</div> <div><div></div>SHARED DISPLAY, SHARED CONTROL, FIELD MOUNTED</div> <div><div></div>SHARED DISPLAY, SHARED CONTROL, PRIMARY LOCATION - NORMALLY ACCESSIBLE TO OPERATOR</div> <div><div></div>PROGRAMMABLE LOGIC CONTROL, PRIMARY LOCATION - NORMALLY ACCESSIBLE TO OPERATOR</div> <div><div></div>PROGRAMMABLE LOGIC CONTROL, FIELD MOUNTED</div>	<div><div></div>BALL VALVE</div> <div><div></div>BUTTERFLY VALVE</div> <div><div></div>CONE VALVE</div> <div><div></div>CHECK VALVE</div> <div><div></div>DOUBLE-DISK CHECK VALVE</div> <div><div></div>BALL CHECK VALVE</div> <div><div></div>DIAPHRAGM VALVE</div> <div><div></div>GATE VALVE</div> <div><div></div>GLOBE VALVE</div> <div><div></div>KNIFE GATE VALVE</div> <div><div></div>NEEDLE VALVE</div> <div><div></div>PINCH VALVE</div> <div><div></div>PLUG VALVE</div> <div><div></div>THREE-WAY BALL VALVE</div> <div><div></div>THREE-WAY PLUG VALVE</div> <div><div></div>PRESSURE-REDUCING VALVE</div> <div><div></div>PRESSURE-REGULATING VALVE</div> <div><div></div>THREE-WAY CONTROL VALVE</div> <div><div></div>PRESSURE-RELIEF VALVE</div> <div><div></div>AIR-RELEASE VACUUM VALVE A = AIR RELEASE VAC = VACUUM</div>	<table><tr><th colspan="2">FIRST LETTER</th><th colspan="3">SUCCEEDING LETTERS</th></tr><tr><th></th><th>MEASURED OR INITIATING VARIABLE</th><th>VARIABLE MODIFIER</th><th>READOUT OR PASSIVE FUNCTION</th><th>OUTPUT/ACTIVE FUNCTION</th><th>FUNCTION MODIFIER</th></tr><tr><td>A</td><td>ANALYSIS</td><td></td><td>ALARM</td><td></td><td></td></tr><tr><td>B</td><td>BURNER, COMBUSTION</td><td></td><td>USER'S CHOICE</td><td>USER'S CHOICE</td><td>USER'S CHOICE</td></tr><tr><td>C</td><td>USERS CHOICE</td><td></td><td></td><td>CONTROL</td><td>CLOSED</td></tr><tr><td>D</td><td>USERS CHOICE</td><td>DIFFERENTIAL</td><td></td><td></td><td>DEVIATION</td></tr><tr><td>E</td><td>VOLTAGE</td><td></td><td>SENSOR (PRIMARY ELEMENT)</td><td></td><td></td></tr><tr><td>F</td><td>FLOW RATE</td><td>RATIO (FRACTION)</td><td></td><td></td><td></td></tr><tr><td>G</td><td>USER'S CHOICE</td><td></td><td>GLASS, GAUGE VIEWING DEVICE</td><td></td><td></td></tr><tr><td>H</td><td>HAND</td><td></td><td></td><td></td><td>HIGH</td></tr><tr><td>I</td><td>CURRENT (ELECTRICAL)</td><td></td><td>INDICATE</td><td></td><td></td></tr><tr><td>J</td><td>POWER</td><td>SCAN</td><td>SCAN</td><td></td><td></td></tr><tr><td>K</td><td>TIME, TIME SCHEDULE</td><td>TIME, RATE OF CHANGE</td><td></td><td>CONTROL STATION</td><td></td></tr><tr><td>L</td><td>LEVEL</td><td></td><td>LIGHT</td><td></td><td>LOW</td></tr><tr><td>M</td><td>USER'S CHOICE</td><td></td><td></td><td></td><td>MIDDLE, INTERMEDIATE</td></tr><tr><td>N</td><td>USER'S CHOICE</td><td></td><td>USER'S CHOICE</td><td>USER'S CHOICE</td><td>USER'S CHOICE</td></tr><tr><td>O</td><td>USER'S CHOICE</td><td></td><td>ORIFICE, RESTRICTION</td><td></td><td></td></tr><tr><td>P</td><td>PRESSURE, VACUUM</td><td></td><td>POINT (TEST) CONNECTION</td><td></td><td></td></tr><tr><td>Q</td><td>QUANTITY</td><td>INTEGRATE, TOTALIZE</td><td>INTEGRATE, TOTALIZE</td><td></td><td></td></tr><tr><td>R</td><td>RADIATION</td><td></td><td>RECORD</td><td></td><td>RUN</td></tr><tr><td>S</td><td>SPEED, FREQUENCY</td><td>SAFETY</td><td></td><td>SWITCH</td><td>STOP</td></tr><tr><td>T</td><td>TEMPERATURE</td><td></td><td></td><td>TRANSMIT</td><td></td></tr><tr><td>U</td><td>MULTIVARIABLE</td><td></td><td>MULTIFUNCTION</td><td>MULTIFUNCTION</td><td>MULTIFUNCTION</td></tr><tr><td>V</td><td>VIBRATION, MECH. ANALYSIS</td><td></td><td></td><td>VALVE, DAMPER, LOUVER</td><td></td></tr><tr><td>W</td><td>WEIGHT, FORCE</td><td></td><td>WELL PROBE</td><td></td><td></td></tr><tr><td>X</td><td>UNCLASSIFIED</td><td>X AXIS</td><td>ACCESSORY DEVICES UNCLASSIFIED</td><td>UNCLASSIFIED</td><td>UNCLASSIFIED</td></tr><tr><td>Y</td><td>EVENT, STATE OR PRESENCE</td><td>Y AXIS</td><td></td><td>AUXILIARY DEVICES</td><td></td></tr><tr><td>Z</td><td>POSITION, DIMENSION</td><td>Z AXIS SAFETY INSTRUMENTED SYSTEM</td><td></td><td>DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT</td><td></td></tr></table> <div><div>ABBREVIATIONS</div><div><div>MISCELLANEOUS INSTRUMENTATION</div><div>EQUIPMENT ABBREVIATIONS</div></div></div> <div><div>TYPES OF POWER SUPPLY</div><div></div></div>	FIRST LETTER		SUCCEEDING LETTERS				MEASURED OR INITIATING VARIABLE	VARIABLE MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT/ACTIVE FUNCTION	FUNCTION MODIFIER	A	ANALYSIS		ALARM			B	BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE	C	USERS CHOICE			CONTROL	CLOSED	D	USERS CHOICE	DIFFERENTIAL			DEVIATION	E	VOLTAGE		SENSOR (PRIMARY ELEMENT)			F	FLOW RATE	RATIO (FRACTION)				G	USER'S CHOICE		GLASS, GAUGE VIEWING DEVICE			H	HAND				HIGH	I	CURRENT (ELECTRICAL)		INDICATE			J	POWER	SCAN	SCAN			K	TIME, TIME SCHEDULE	TIME, RATE OF CHANGE		CONTROL STATION		L	LEVEL		LIGHT		LOW	M	USER'S CHOICE				MIDDLE, INTERMEDIATE	N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE	O	USER'S CHOICE		ORIFICE, RESTRICTION			P	PRESSURE, VACUUM		POINT (TEST) CONNECTION			Q	QUANTITY	INTEGRATE, TOTALIZE	INTEGRATE, TOTALIZE			R	RADIATION		RECORD		RUN	S	SPEED, FREQUENCY	SAFETY		SWITCH	STOP	T	TEMPERATURE			TRANSMIT		U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION	V	VIBRATION, MECH. 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THIS IS A STANDARD INSTRUMENTATION SYMBOLOGY AND ABBREVIATIONS SHEET. LISTING OF SYMBOLS AND ABBREVIATIONS DOES NOT IMPLY ALL SYMBOLS AND ABBREVIATIONS HAVE BEEN USED ON THIS PROJECT.</div> <div>2. SEE PROCESS, MECHANICAL AND PLUMBING LEGEND SHEET FOR MISCELLANEOUS PIPING SYMBOLS.</div> <div>3. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.</div> <div>4. VALVE SYMBOLS SHOWN HERE ARE APPLICABLE ONLY TO INSTRUMENTATION DIAGRAMS. SEE PROCESS, MECHANICAL AND PLUMBING LEGEND SHEET FOR VALVE SYMBOLS USED ELSEWHERE ON THE SHEETS.</div>
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[illegible]

PROJECT MANAGER	K. PRINDS
CIVIL	M. WIEBELHAUS
ARCHITECTURAL	E. BUTTMAN
MECHANICAL	M. WARRICK
PROJECT NUMBER	10417754


**PRELIMINARY
NOT FOR
CONSTRUCTION OR
RECORDING**



**City of Lee's Summit, MO
Water Utilities Facility & Parking Lot
Expansion**

PROCESS AND INSTRUMENTATION LEGEND

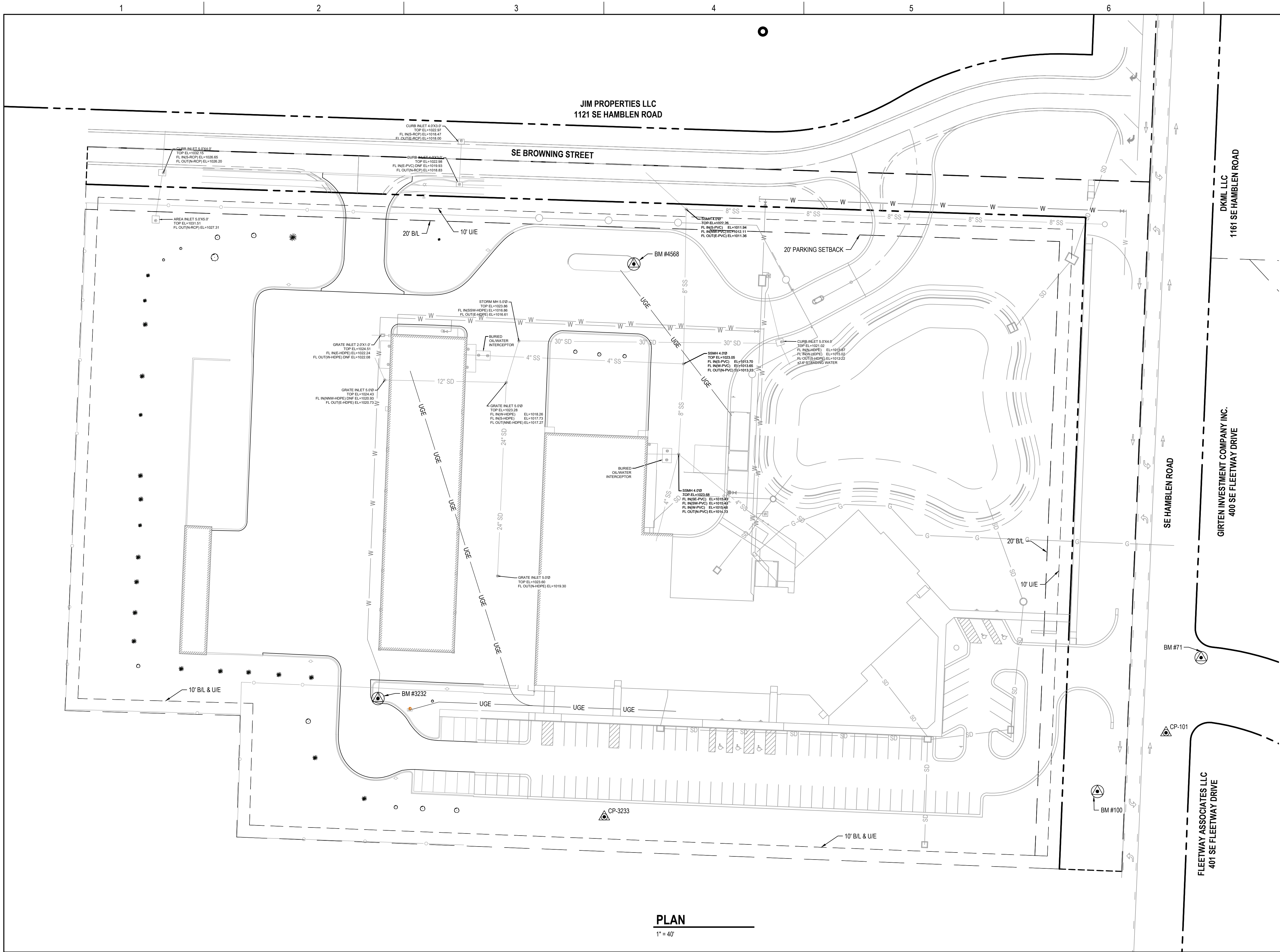
FILE NAME | FileName
SCALE | 12" = 1'-0"



A horizontal graphic scale bar with alternating black and white segments. It is marked with '0' at the left end, '1"' at the midpoint, and '2' at the right end.

SHEET
00G007

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PLAN

1" = 40'

GENERAL NOTES

1. THE CURRENT EXISTING SURVEY DATA HAS BEEN COMPILED BY FIELD TOPOGRAPHIC SURVEY AND AS-BUILT INFORMATION. TOPOGRAPHICAL SURVEY DATA IS SHOWN IN BOLD LINE WORK. SUPPLEMENTAL AS-BUILT INFORMATION IS SHOWN AS GRAYSCALE FOR INFORMATIONAL PURPOSES ONLY.
2. PROPERTY LINE AND RIGHT-OF-WAY MONUMENTS SHALL NOT BE DISTURBED BY CONSTRUCTION. IF DISTURBED, THEY SHALL BE RESET TO THEIR ORIGINAL LOCATIONS BY A REGISTERED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.

HORIZONTAL AND VERTICAL CONTROL DATA

HORIZONTAL DATUM= MISSOURI STATE PLANE, WEST ZONE (NAD83)
SCALED FROM 0,0 USING A FACTOR OF 0.9998972/1.000102811
VERTICAL DATUM= NAVD88

CPT-101 (FND 1/2" REBAR)
N=994220.95
E=2827901.54
ELEV=1018.71

Found 1/2" Iron Bar at the SE corner of Hamblen Rd and Fleetway Dr., 72.2' NE of a fire hydrant, 3.2' ESE of back of curb.

CPT-3233 (FND 1/2" REBAR)
N=994153.68
E=28274452.20
ELEV=1028.64

Found 1/2" Iron Bar at the S side of S parking lot to W.U.F., approximately 166' E of the SW corner parking lot, 12' S of back of curb.

Benchmarks

BM-71 ELEV=1020.25
Top center of Fire Hydrant Nut at the NE corner of Hamblen Rd and Fleetway Dr.

BM-100 ELEV=1021.44
Found "+" cut at top SE flange bolt of a Fire Hydrant at W side Hamblen Rd, S of W.U.F. entrance.

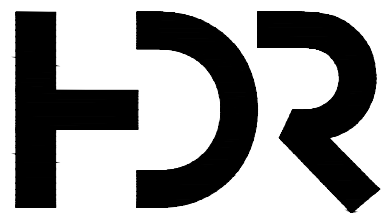
BM-3232 ELEV=1030.51
Found "+" cut at top SSW flange bolt of a Fire Hydrant at N side cul-de-sac.

BM-4568 ELEV=1023.19
Set square cut at E side nose of conc. island for fuel tanks, N side W.U.F.

Note:
All Control Points shown have elevations established using standard surveying procedures and can be used as temporary benchmarks. When using a Control point as a temporary benchmark, it is recommended that checks be made to other control points or benchmarks to confirm elevations prior to use.

SURVEY NOTES

1. ALL WATER LINES AND ELECTRICAL LINES SHOWN ARE BASED ON WATER UTILITIES FACILITY PLAN PROJECT #224935 DATED APRIL 15, 2016, MODIFIED JULY 26, 2017 UNLESS OTHERWISE NOTED.



HDR ENGINEERING, INC. | CA0443AE
10450 HOLMES ROAD, SUITE 600
KANSAS CITY, MO 64131
(816) 360-2600
MO CERTIFICATE OF AUTHORITY #: 000856

ISSUE	DATE	DESCRIPTION
	03/07/2025	FINAL DEVELOPMENT PLAN

PROJECT MANAGER	K. PRINDS
CIVIL	M. WIEBELHAUS
ARCHITECTURAL	ERICA BUTTMAN
MECHANICAL	M. WARRICK
PROJECT NUMBER	10417754

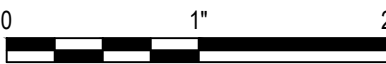
PRELIMINARY
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CONSTRUCTION OR
RECORDING



CITY OF LEE'S SUMMIT, MO
WATER UTILITIES FACILITY &
PARKING LOT EXPANSION

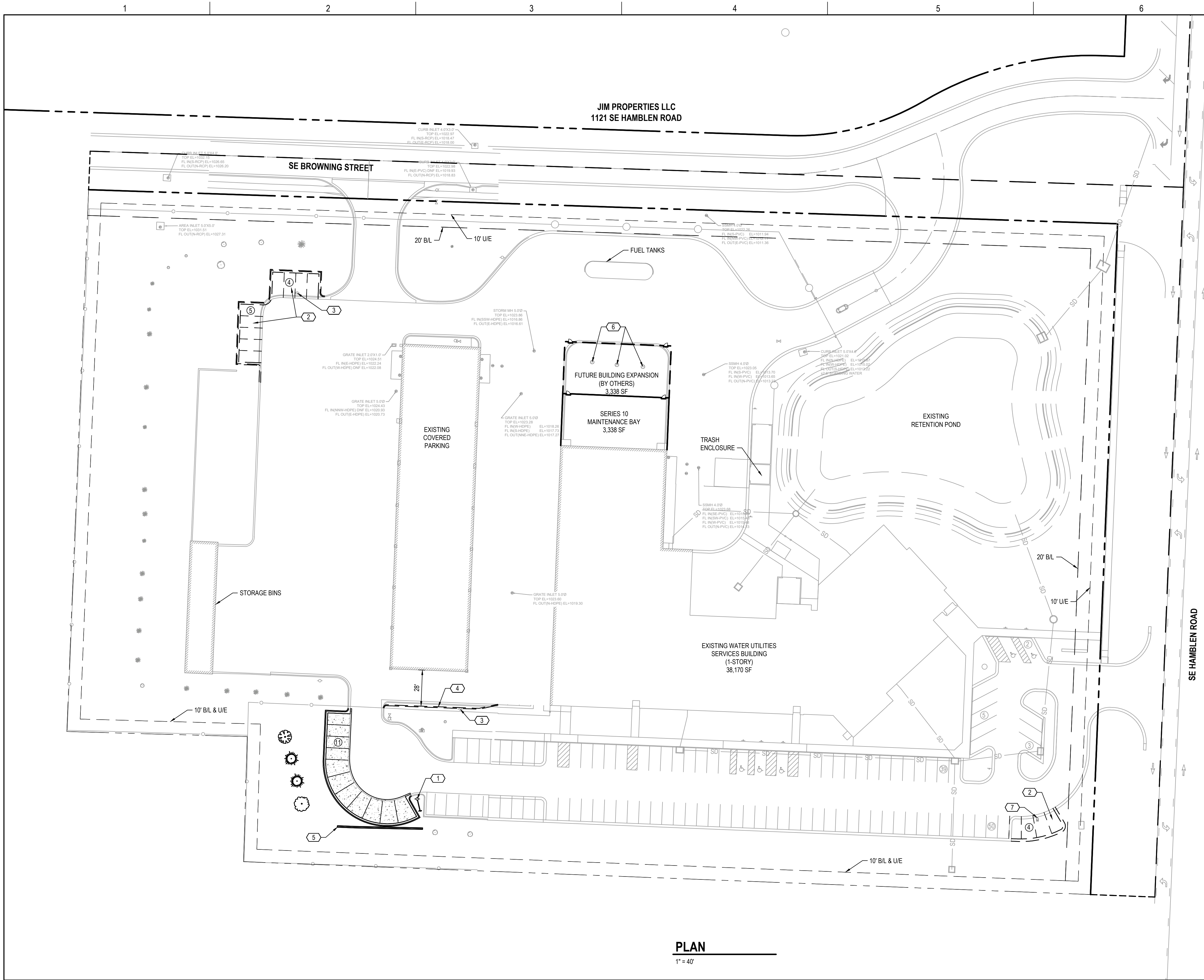
SURVEY CONTROL

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SCALE 1"=40'



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01V101

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PLAN

1" = 40'

GENERAL NOTES

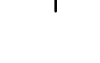
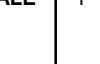
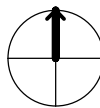
- THE PROJECT IS LOCATED IN THE FEMA FIRM PANEL 29095C0438G AND IS NOT LOCATED WITHIN THE LIMITS OF THE 100-YEAR OR 500-YEAR FLOODPLAIN LIMITS.

KEYNOTES

- RELOCATE SITE LIGHT (RE: 400C-501).
- FUTURE PARKING STALLS (BY OTHERS).
- FUTURE RELOCATE LIGHT POLE (BY OTHERS).
- FUTURE REMOVE AND REPLACE EXISTING CURB (BY OTHERS).
- RETAINING WALL (RE: 01C-801).
- FUTURE RELOCATE TREES (BY OTHERS).
- FUTURE RELOCATE EXISTING MAILBOX (BY OTHERS).

LEGEND

CONCRETE PAVEMENT



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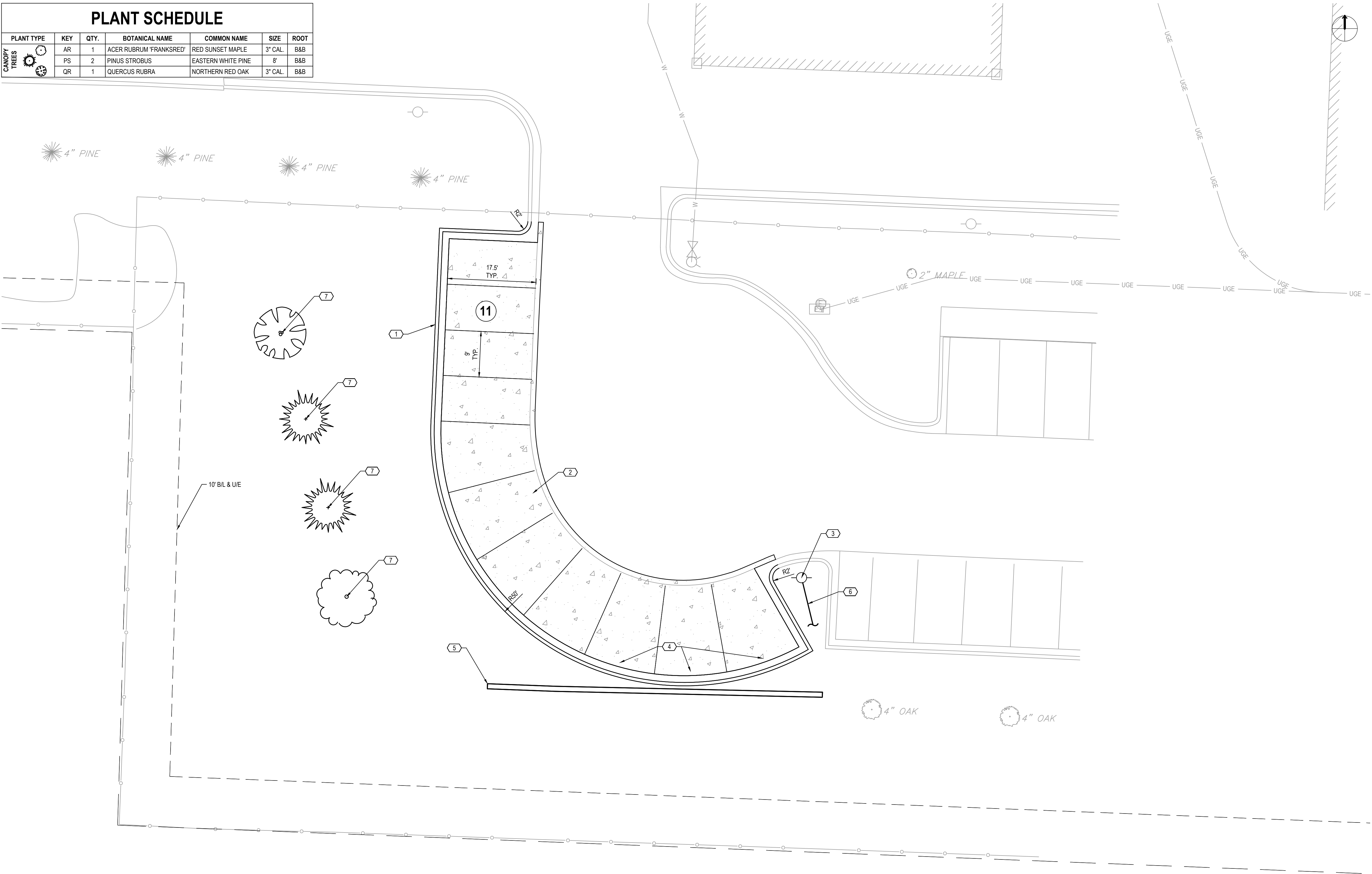
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8

PLANT SCHEDULE

PLANT TYPE	KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT
CANOPY TREES	AR	1	ACER RUBRUM 'FRANKSRED'	RED SUNSET MAPLE	3" CAL.	B&B
	PS	2	PINUS STROBUS	EASTERN WHITE PINE	8'	B&B
	QR	1	QUERCUS RUBRA	NORTHERN RED OAK	3" CAL.	B&B



PLAN

1" = 10'

GENERAL NOTES

- ADJUST EXISTING MANHOLES, VALVE BOXES, AND STRUCTURES TO MATCH NEW GRADE THAT FALL WITHIN THE LIMITS OF THIS CONTRACT.
- THE LOCATION OF UNDERGROUND UTILITIES / PROCESS LINES ARE APPROXIMATE. NO EXCAVATION WILL BE PERMITTED UNTIL BURIED UTILITIES HAVE BEEN VISIBLY LOCATED BY THE CONTRACTOR.
- ALL SITE WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL, LEE'S SUMMIT UNIFIED DEVELOPMENT ORDINANCE (UDO), AND THESE PLANS.
- THE CONTRACTOR SHALL ADJUST TO GRADE ALL WATER AND PROCESS VALVE BOXES/MANHOLES THAT FALL WITHIN THE LIMITS OF THIS CONTRACT. THE CONTRACTOR SHALL KEEP ALL UTILITIES AND SEWERS FREE OF DEBRIS AND OPERABLE AT ALL TIMES DURING CONSTRUCTION.

KEYNOTES

- CURB & GUTTER (CG-1 DRY) (RE: 00C-503).
- LIGHT DUTY CONCRETE PARKING LOT SECTION (RE: 2/00C-501).
- RELOCATE SITE LIGHT (RE: 4/00C-501).
- INSTALL PRECAST CONCRETE WHEEL STOP (RE: 5/00C-501).
- RETAINING WALL (RE: 01C-801).
- RECONNECT RELOCATED LIGHT TO ITS ORIGINAL CIRCUIT. ROUTE OF UNDERGROUND CIRCUIT IS UNKNOWN. FIELD VERIFY UNDERGROUND CIRCUIT LOCATION PRIOR TO WORK AND NOTIFY ENGINEER. RE-USE EXISTING UNDERGROUND CONDUIT AND WIRE TO THE GREATEST EXTENT POSSIBLE. PROVIDE NEW CONDUIT AND WIRE, IF NECESSARY, AND MATCH EXISTING.
- PLANT NEW TREE (RE: PLANT SCHEDULE ON THIS SHEET).

LEGEND

CONCRETE PAVEMENT



HDR ENGINEERING, INC. | CA0443AE
10450 HOLMES ROAD, SUITE 600
KANSAS CITY, MO 64131
(816) 360-2600
MO CERTIFICATE OF AUTHORITY #: 000856

ISSUE	DATE	DESCRIPTION
03/07/2025	FINAL DEVELOPMENT PLAN	

PROJECT MANAGER	K. PRINDS
CIVIL	M. WIEBELHAUS
ARCHITECTURAL	ERICA BUTTMAN
MECHANICAL	M. WARRICK
PROJECT NUMBER	10417754

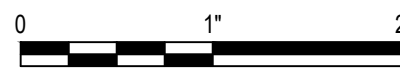
PRELIMINARY
NOT FOR
CONSTRUCTION OR
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CITY OF LEE'S SUMMIT, MO
WATER UTILITIES FACILITY &
PARKING LOT EXPANSION

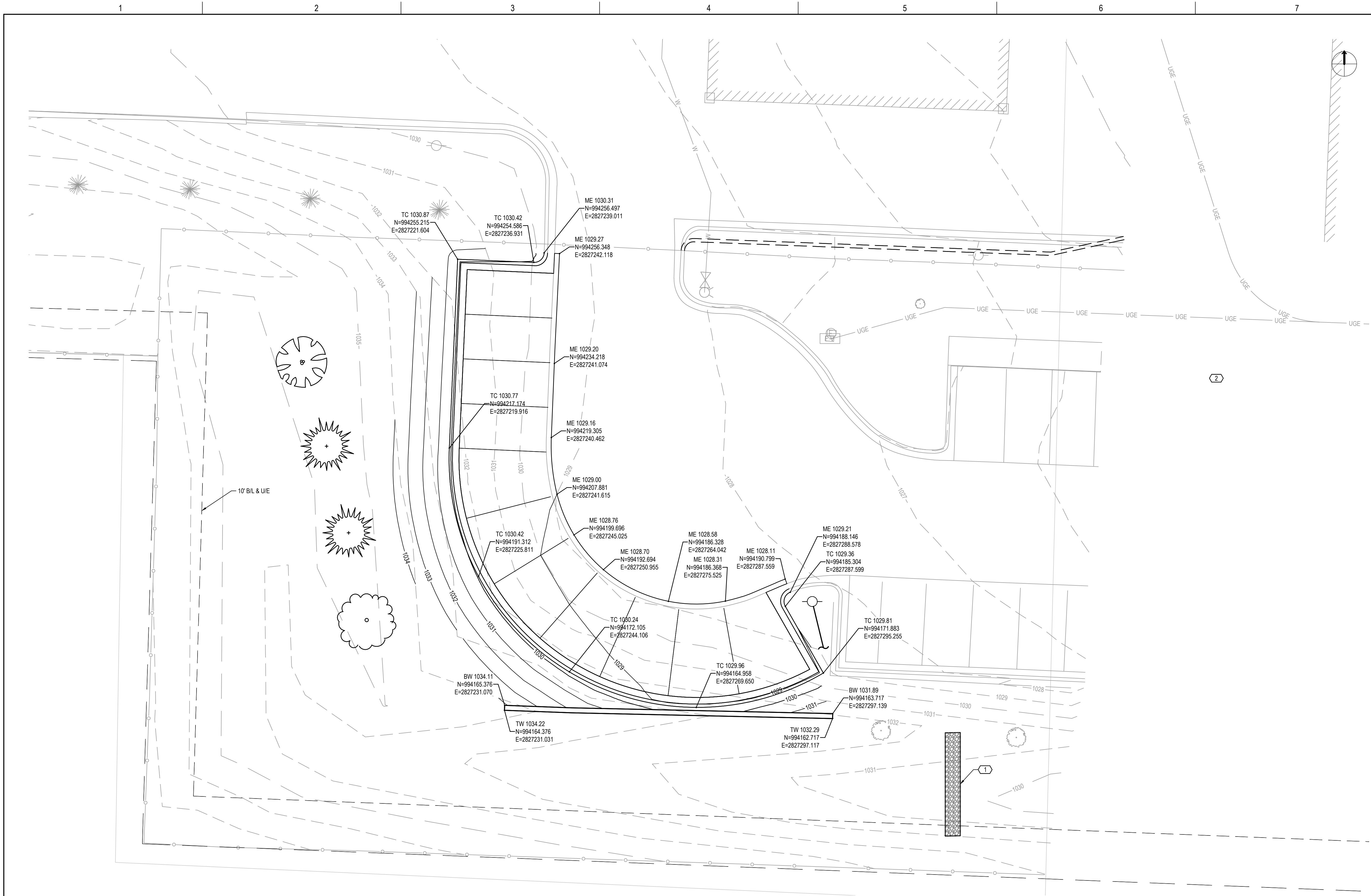
ENLARGED SITE PLAN

FILENAME 10417754-01C-102.DWG
SCALE 1"=10'



SHEET #
01C102

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PLAN

1" = 10'

GENERAL NOTES

1. GRADING ACTIVITIES SHALL CONFIRM TO THE REQUIREMENTS OF LEE'S SUMMIT SECTION 2100 - GRADING AND SITE PREPARATION AND SECTION 2150 - EROSION AND SEDIMENT CONTROL.
2. GRADED SLOPES SHALL NOT EXCEED 3:1.
3. VERIFY PARKING GRADES TO CONFIRM POSITIVE DRAINAGE IS MAINTAINED WITHOUT THE PRESENCE OF PONDING WATER.
4. THE FINISH GRADING AROUND BUILDINGS SHALL PROVIDE POSITIVE DRAINAGE AWAY AND AVOID PONDING WATER.
5. FINAL GRADING EXTENTS SHALL BE ADJUSTED AS NECESSARY TO ENSURE POSITIVE DRAINAGE.
6. OPEN AREAS NOT COVERED WITH OTHER MATERIALS SHALL BE SEEDED WITH NO MOW LAWN MIX, PRODUCT #50091, PRARUE NURSERY, WESTFIELD, WI TO MATCH THE EXISTING GRASS.

KEYNOTES

1. ROCK DITCH CHECK (RE: 2/00C-502).
2. INLET PROTECTION ON DOWNSTREAM COMBINATION GRATE INLET (RE: 3/00C-501).

LEGEND

TC-TOP OF CURB
TP-TOP OF PAVEMENT
TW-TOP OF WALL
BW-BOTTOM OF WALL
ME-MATCH EXISTING



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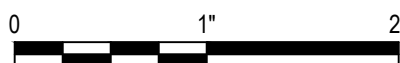
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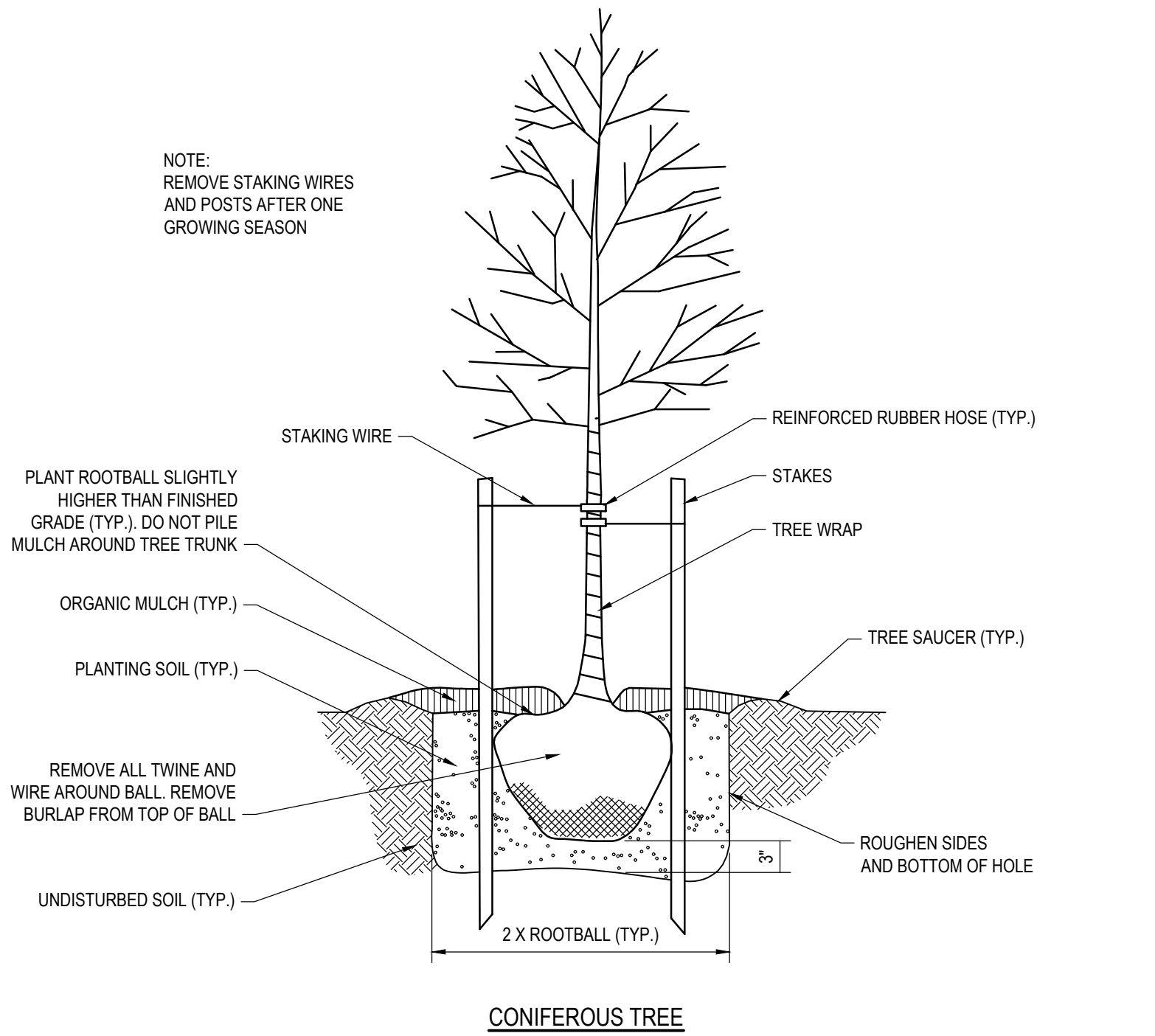
CITY OF LEE'S SUMMIT, MO
WATER UTILITIES FACILITY &
PARKING LOT EXPANSION

GRADING & EROSION CONTROL PLAN

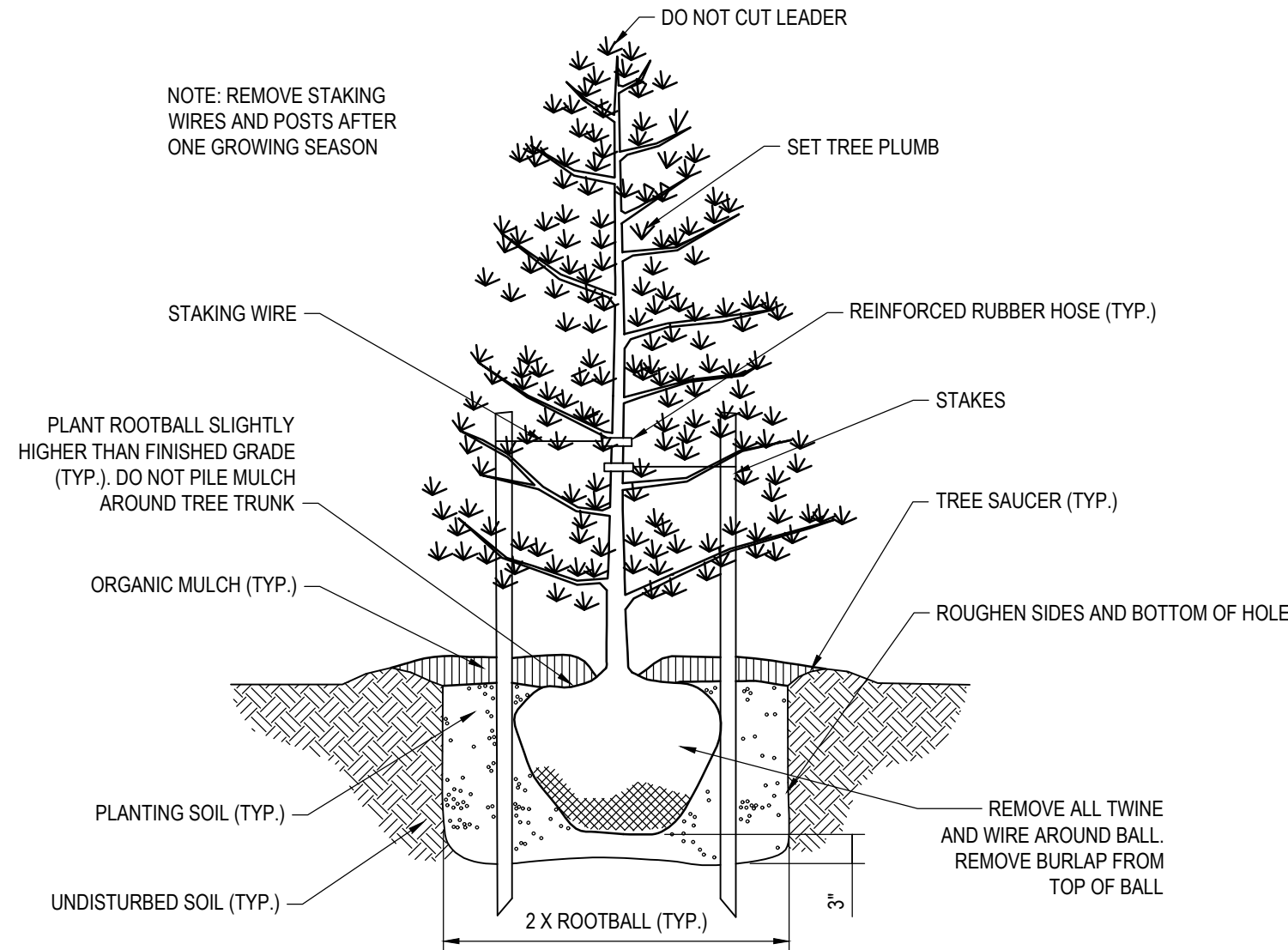
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01C103

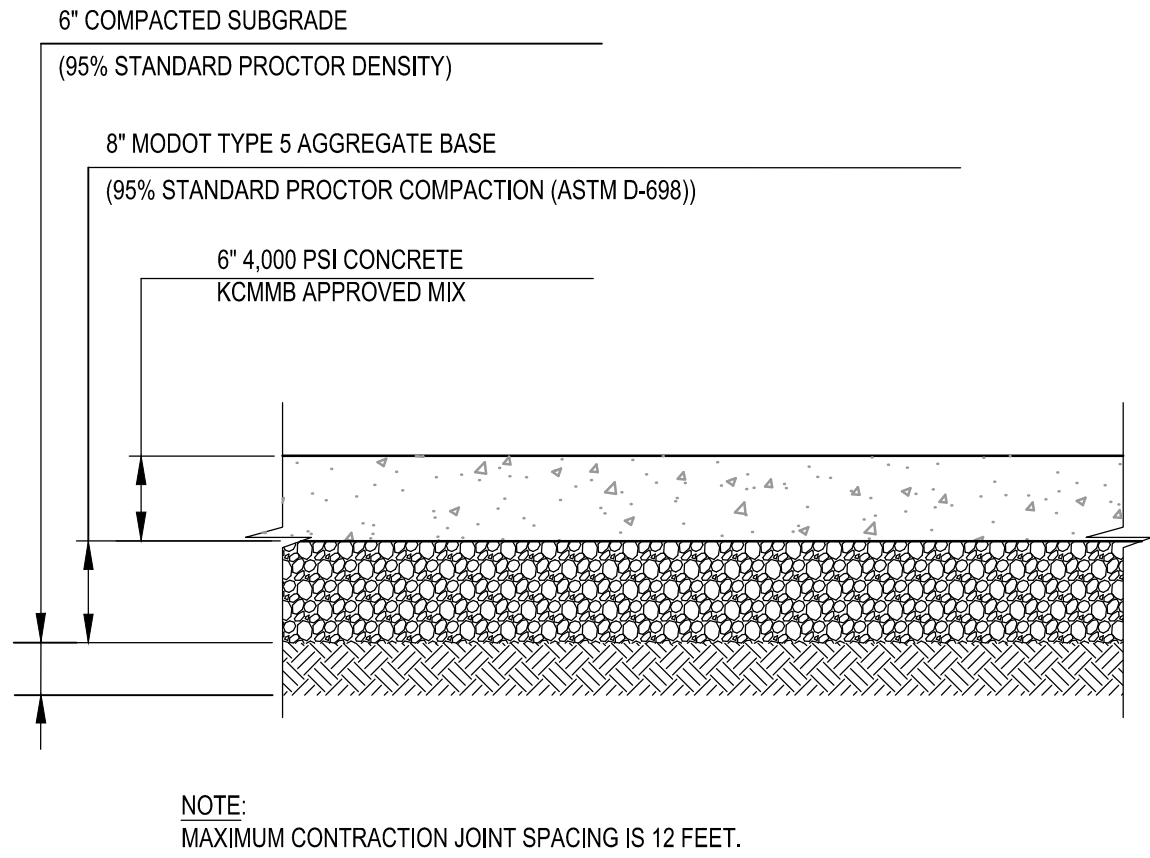


CONIFEROUS TREE

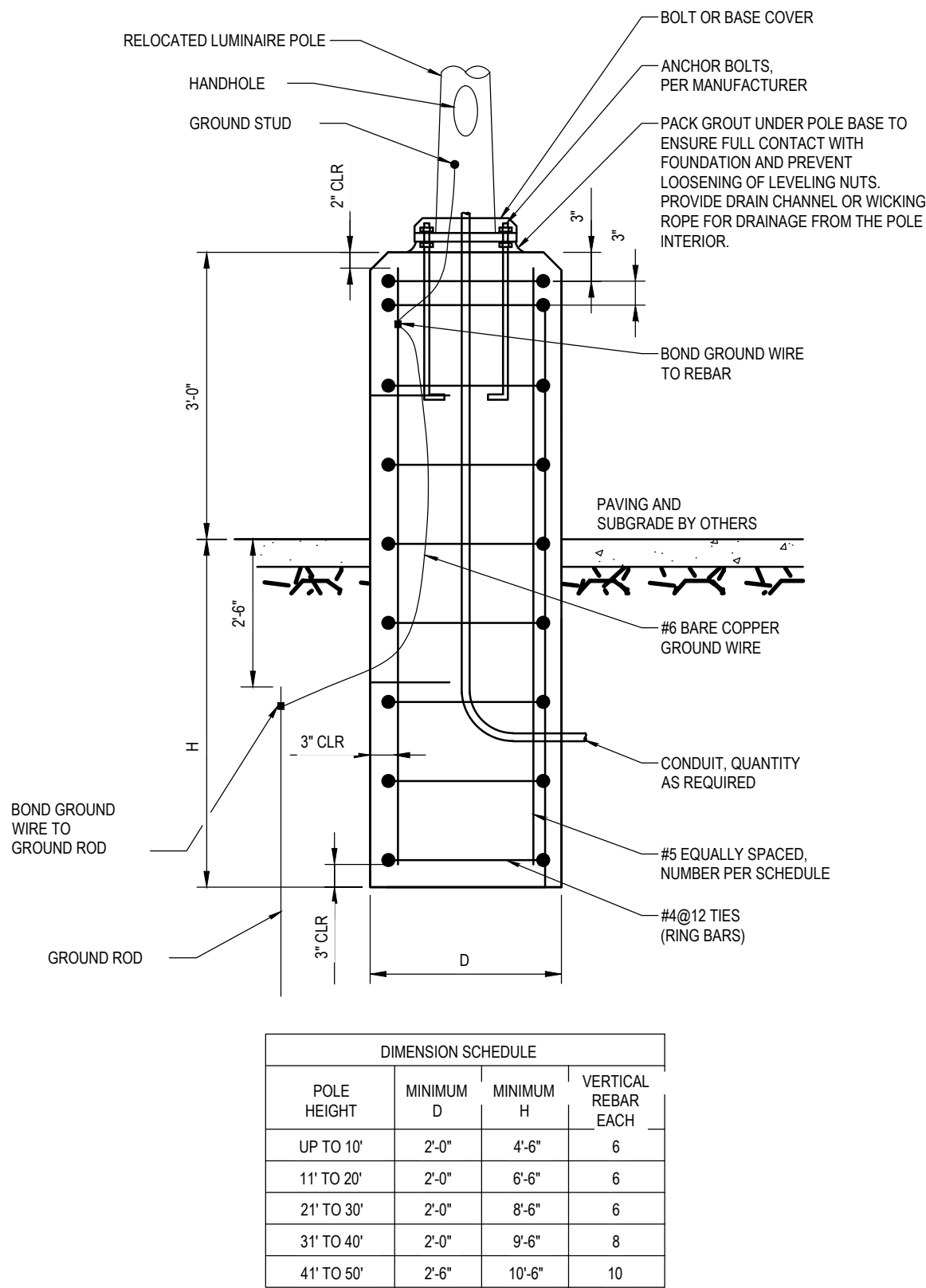


DECIDUOUS TREE

1 TREE PLANTING DETAIL
NTS

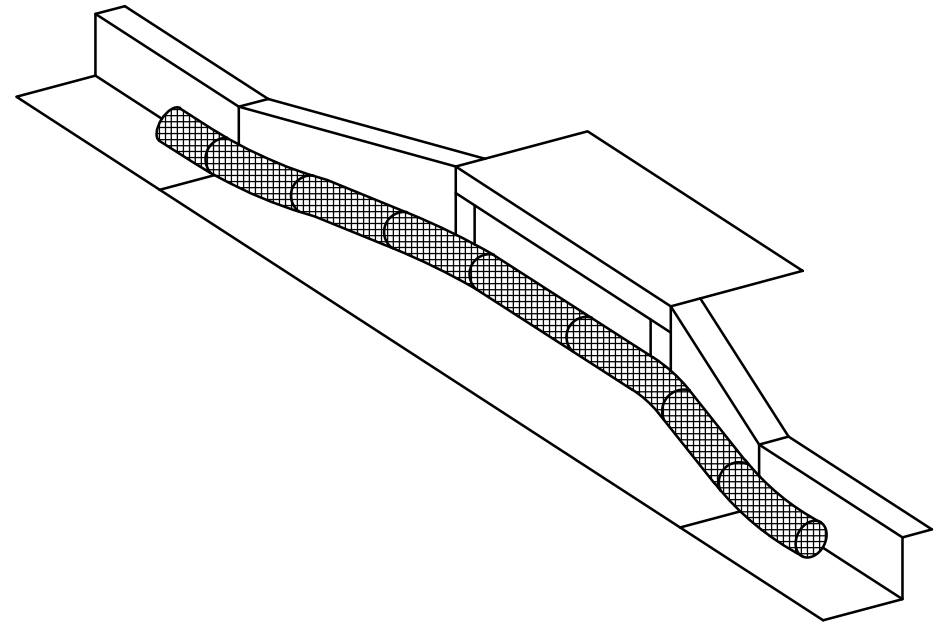


2 LIGHT DUTY CONCRETE PARKING LOT SECTION
NTS



- NOTES:
1. CONCRETE AND REINFORCING STEEL: SEE DIVISION 3.

4 36" POLE BASE FOUNDATION
NTS

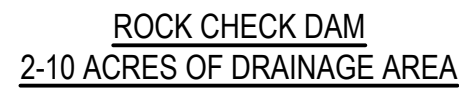
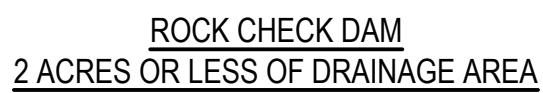


- NOTES:
1. THE GUTTERBUDDY® OR APPROVED EQUAL SHALL BE A FILTER MANUFACTURED FROM RECYCLED SYNTHETIC FIBERS OR APPROVED ALTERNATIVE.
 2. THE GUTTERBUDDY® WILL BE MANUFACTURED TO BE 9" IN DIAMETER AND SHALL HAVE A MINIMUM LENGTH OF 24" LONGER THAN THE CURB INLET OPENING. THIS WILL ALLOW FOR SUFFICIENT LENGTH TO COVER THE INLET WITH 12" BEYOND THE INLET ON BOTH ENDS.
 3. THE GUTTERBUDDY® SHALL BE CLEANED IF A VISUAL INSPECTION SHOWS SILT AND DEBRIS BUILD UP AROUND THE GUTTERBUDDY®.
 4. PONDING IS LIKELY IF SEDIMENT IS NOT REMOVED REGULARLY. INSPECTION OF GUTTERBUDDY® SHOULD BE ON A REGULAR BASIS AND IMMEDIATELY AFTER MAJOR RAIN EVENTS.

3 GUTTERBUDDY INLET PROTECTION
NTS GRAVEL FILTER BAG CURB INLET SEDIMENT FILTER MAY BE USED IN LIEU OF GUTTERBUDDY INLET PROTECTION.



1 MODULAR BLOCK RETAILING WALL DETAIL
NTS



SPACING BETWEEN CHECK DAMS

ROCK CHECK DAM NOTES:

- A) CONSTRUCTION SPECIFICATIONS & INSTALLATION:**
1. THE DRAINAGE AREA OF THE DITCH OR SWALE BEING PROTECTED SHALL NOT EXCEED 2 ACRES WHEN A COARSE AGGREGATE IS USED ALONE AND SHALL NOT EXCEED 10 ACRES WHEN A COMBINATION OF CLASS I RIPRAP AND COARSE AGGREGATE IS USED. AN EFFORT SHOULD BE MADE TO EXTEND THE STONE TO THE TOP OF CHANNEL BANKS.
 2. THE MAXIMUM HEIGHT OF THE DAM SHALL BE 3 FEET. THE CENTER OF THE CHECK DAM IS AT THE SAME ELEVATION AS THE TOP OF THE OUTER EDGES.
 3. FOR ADDED STABILITY, THE BASE OF THE CHECK DAM CAN BE KEYED INTO THE SOIL APPROXIMATELY 6 INCHES.
 4. THE MAXIMUM SPACING BETWEEN DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM DAM IS AT THE SAME ELEVATION AS THE TOP OF THE DOWNSTREAM DAM.
 5. STONE SHOULD BE PLACED ACCORDING TO THE CONFIGURATION TO THE LEFT. HAND OR MECHANICAL PLACEMENT WILL BE NECESSARY TO ACHIEVE COMPLETE COVERAGE OF THE DITCH OR SWALE AND TO INSURE THAT THE CENTER OF THE DAM IS LOWER THAN THE EDGES.
 6. GEOTEXTILE MAY BE USED UNDER THE STONE TO PROVIDE A STABLE FOUNDATION AND TO FACILITATE REMOVAL OF THE STONE.

B) INSPECTION AND MAINTENANCE:

1. CHECK DAMS SHOULD BE CHECKED FOR SEDIMENT ACCUMULATION AFTER EACH STORM EVENT OF 1/2-INCH OR GREATER. SEDIMENT SHALL BE REMOVED WHEN IT REACHES ONE HALF OF THE ORIGINAL HEIGHT OF THE DAM.
2. REGULAR INSPECTIONS SHOULD BE MADE TO ENSURE THAT THE CENTER OF THE DAM IS LOWER THAN THE EDGES. EROSION CAUSED BY HIGH FLOWS AROUND THE EDGES OF THE DAM SHALL BE CORRECTED.

C) REMOVAL OF PRACTICE:

1. UNLESS THEY ARE TO BE PERMANENT, CHECK DAMS MUST BE REMOVED WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED. IN TEMPORARY DITCHES AND SWALES, CHECK DAMS SHOULD BE REMOVED AND THE DITCH FILLED WHEN THEY ARE NO LONGER NEEDED. IN PERMANENT STRUCTURES, CHECK DAMS SHOULD BE REMOVED WHEN A PERMANENT LINING CAN BE INSTALLED. IN THE CASE OF GRASS-LINED DITCHES, CHECK DAMS SHOULD BE REMOVED WHEN THE GRASS HAS MATURED SUFFICIENTLY TO PROTECT THE DITCH OR SWALE. THE AREA BENEATH THE CHECK DAMS SHOULD BE SEEDED AND MULCHED IMMEDIATELY AFTER THEY ARE REMOVED. THE USE OF FILTER CLOTH UNDERNEATH THE STONE WILL MAKE REMOVAL OF THE STONE EASIER.

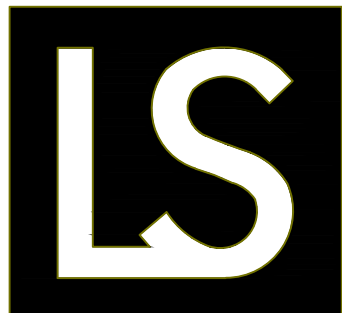
2 ROCK DITCH CHECK INSTALLATION

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CIVIL	M. WIEBELHAUS
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MECHANICAL	M. WARRICK
PROJECT NUMBER	10417754

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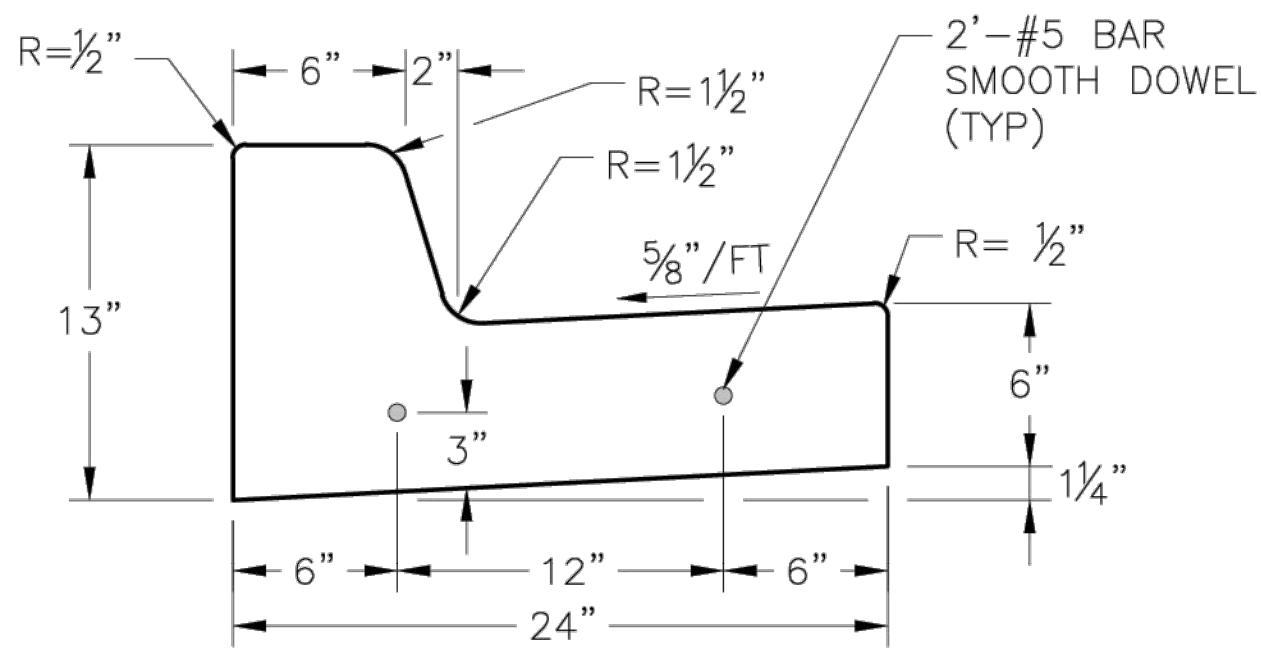
CITY OF LEE'S SUMMIT, MO
WATER UTILITIES FACILITY &
PARKING LOT EXPANSION

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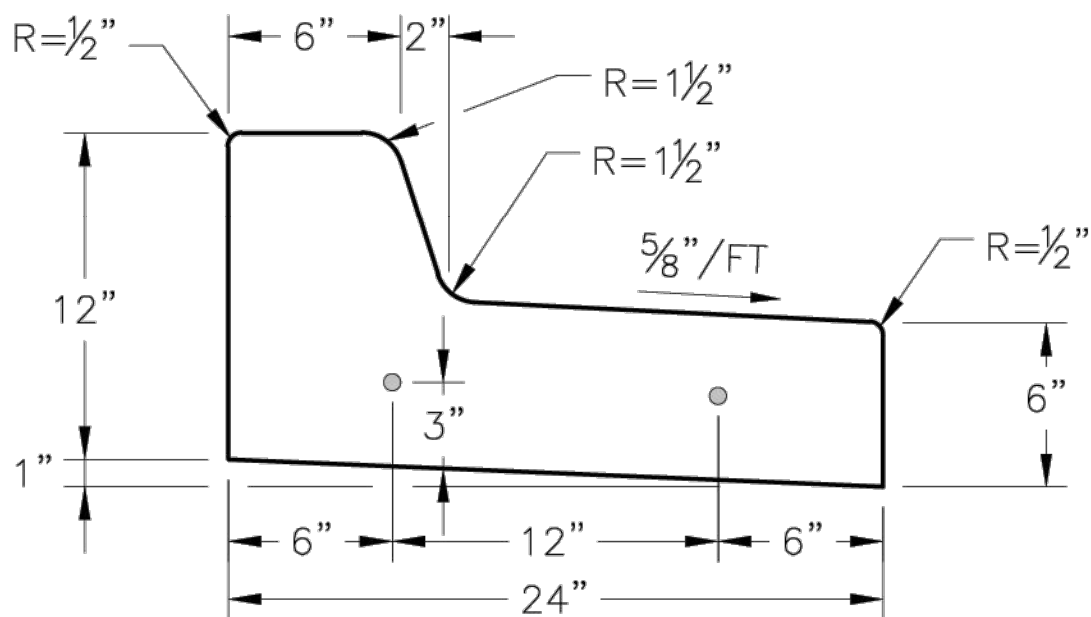


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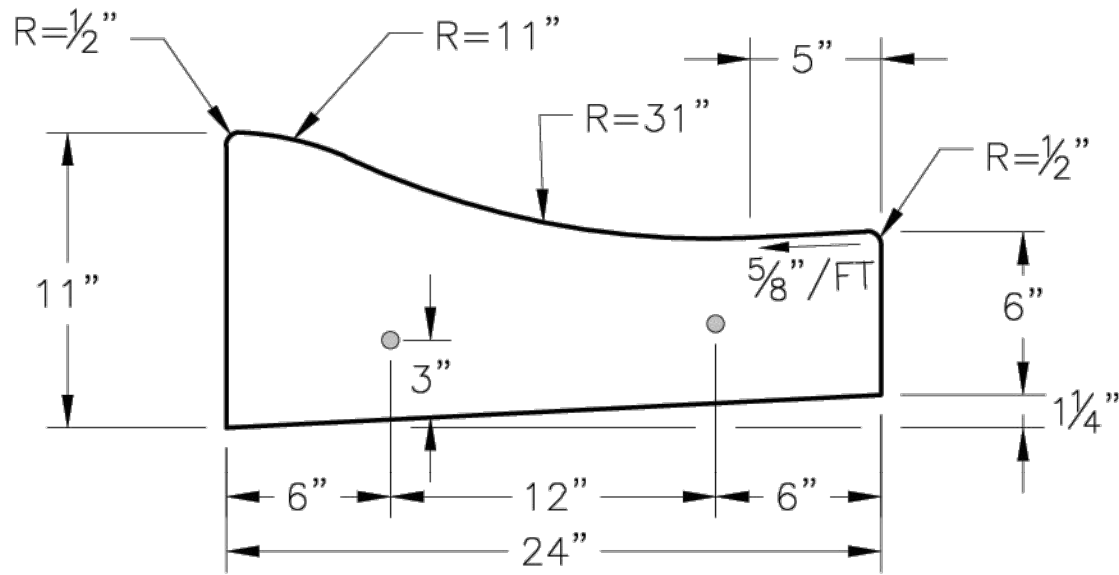
CIVIL DETAILS



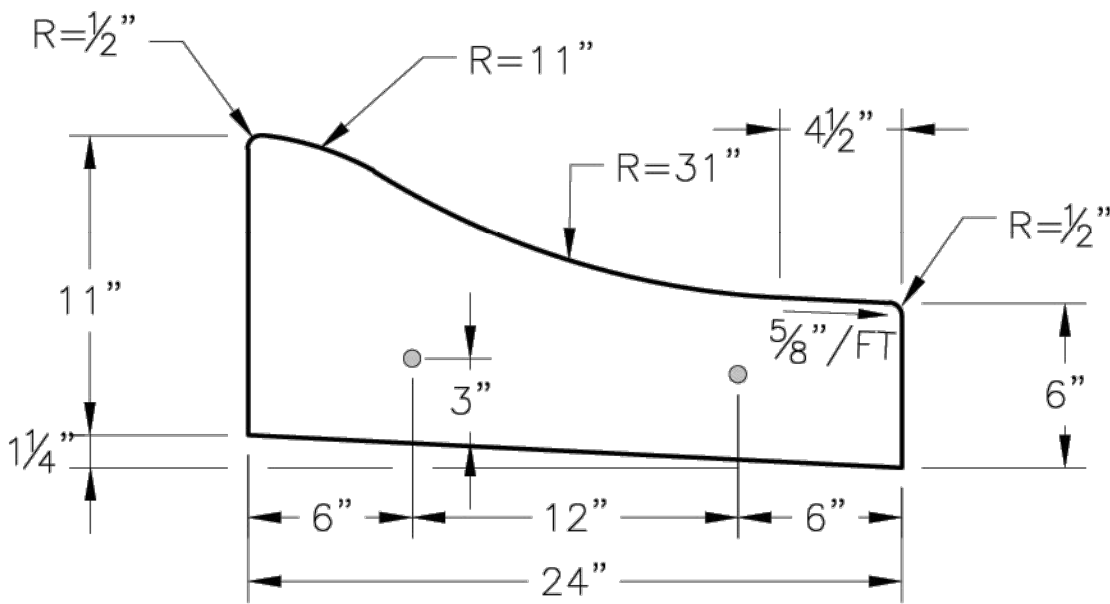
STRAIGHT BACK CURB &
GUTTER
(TYPE CG-1)



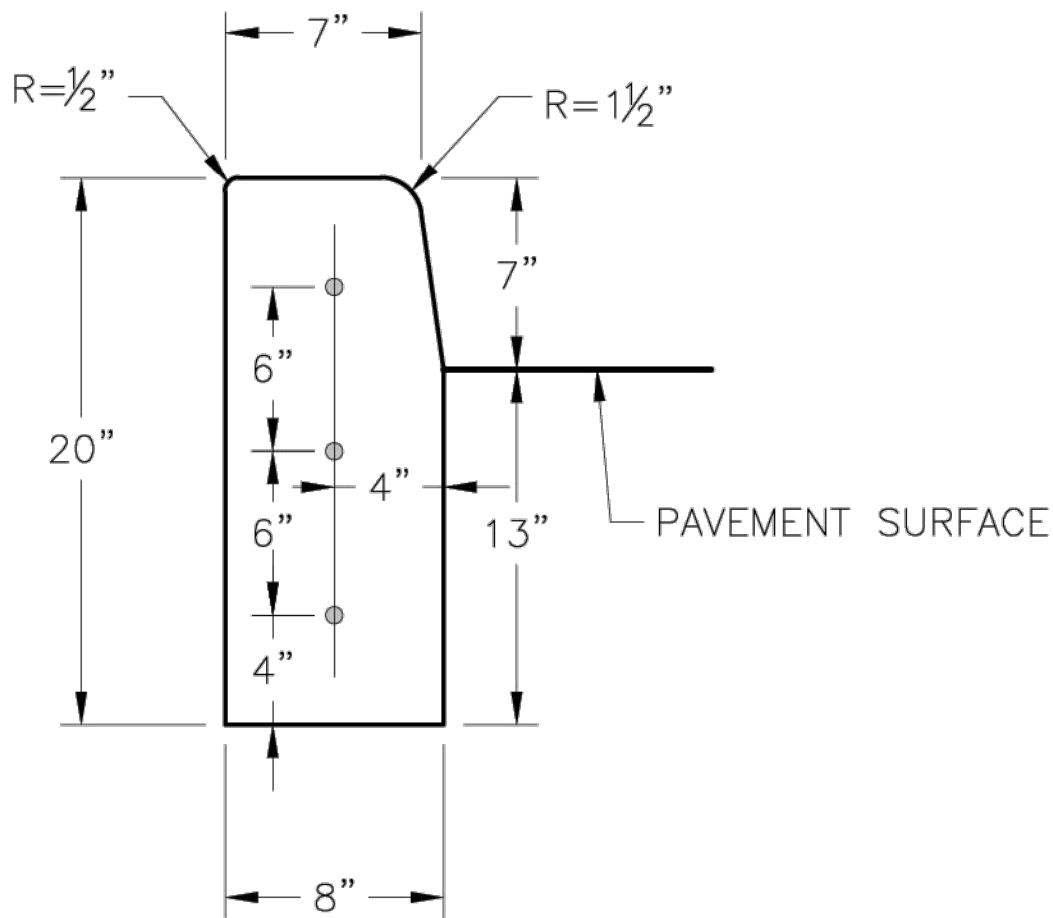
STRAIGHT BACK DRY CURB &
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(TYPE CG-1 DRY)



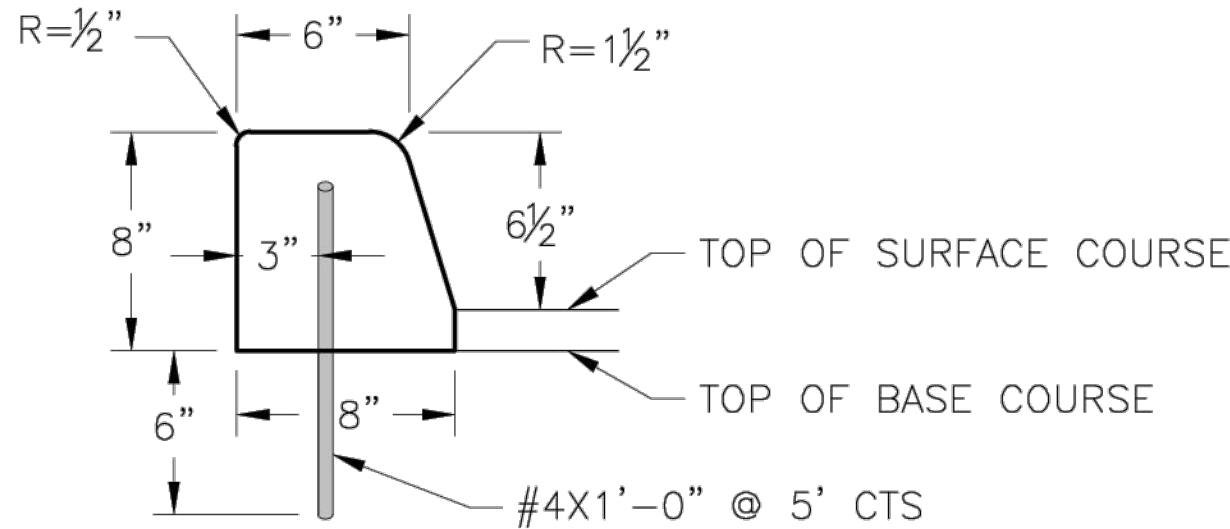
ROLL BACK CURB &
GUTTER
(TYPE CG-2)



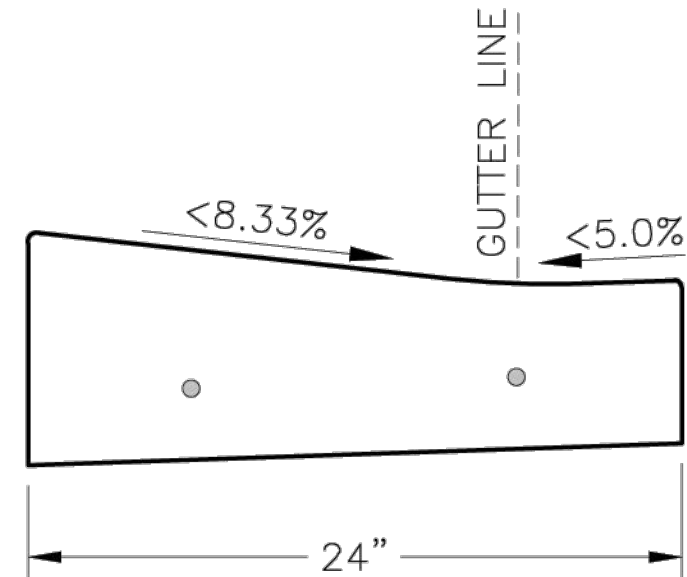
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GUTTER
(TYPE CG-2 DRY)



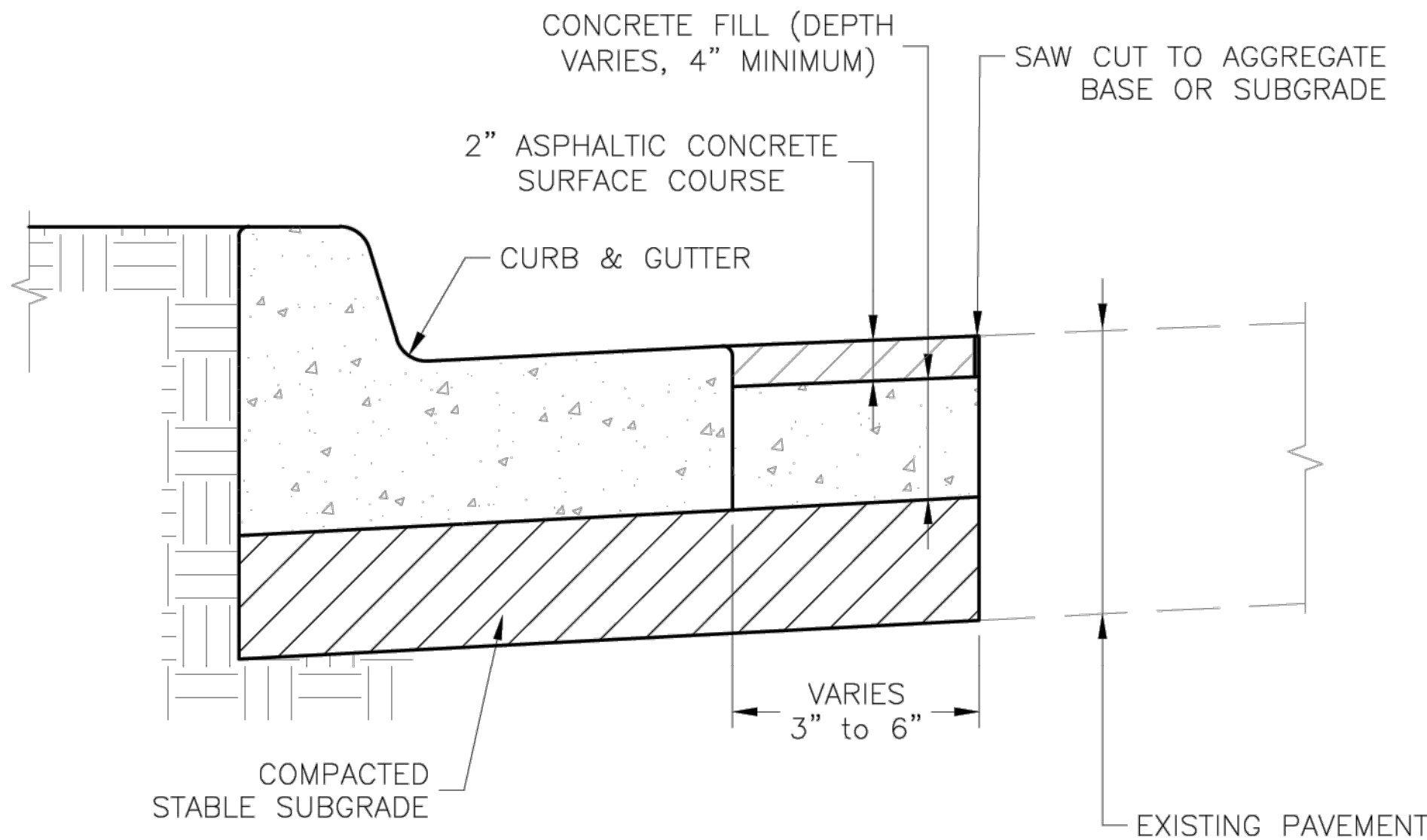
STRAIGHT CURB
(TYPE C-1)



DOWELLED CURB
(TYPE DC)



CURB & GUTTER DETAIL AT RAMP
(ADA SLOPE REQUIREMENTS)



CURB REPLACEMENT DETAIL

GENERAL NOTES

- 3/4" ISOLATION JOINTS WITH 2 (2'-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
- 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
- CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
- KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
- ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
- CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
- WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
- ALL DOWELS & TIE BARS SHALL BE EPOXY COATED.

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

CURB & GUTTER DETAIL

Drawn By: MIF
Checked By: DL
Date: 08/2023
Proj. #:

GEN-4

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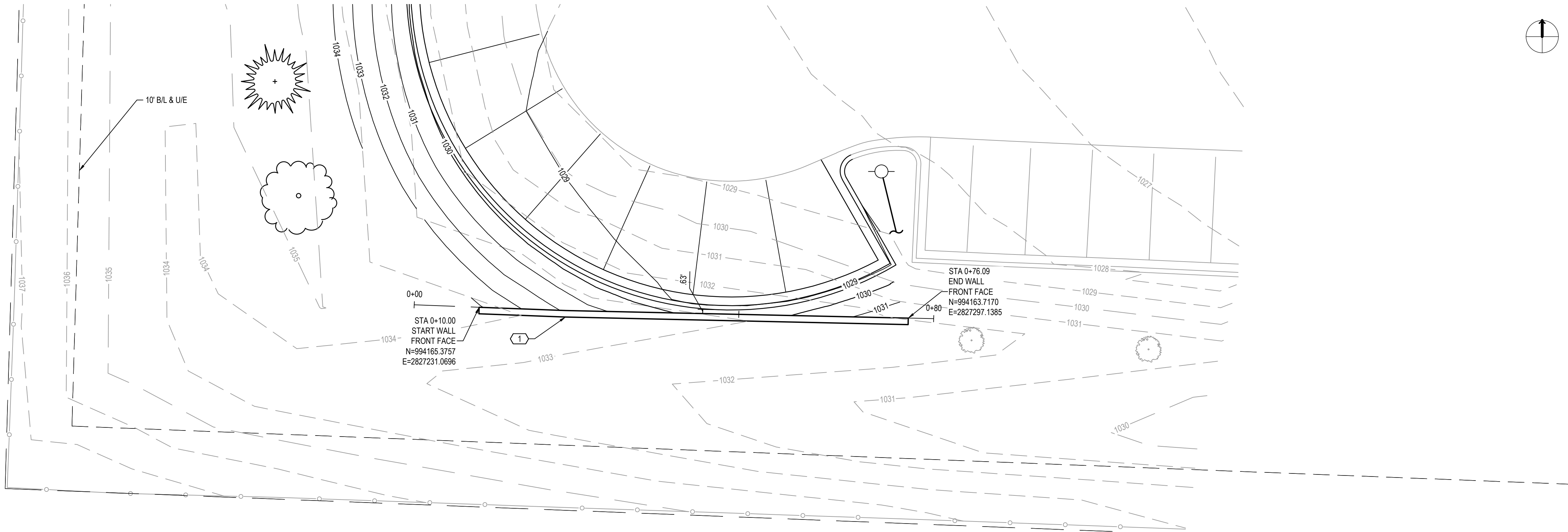
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GENERAL NOTES

1. SPLIT FACE MODULAR CONCRETE BLOCK WALL.

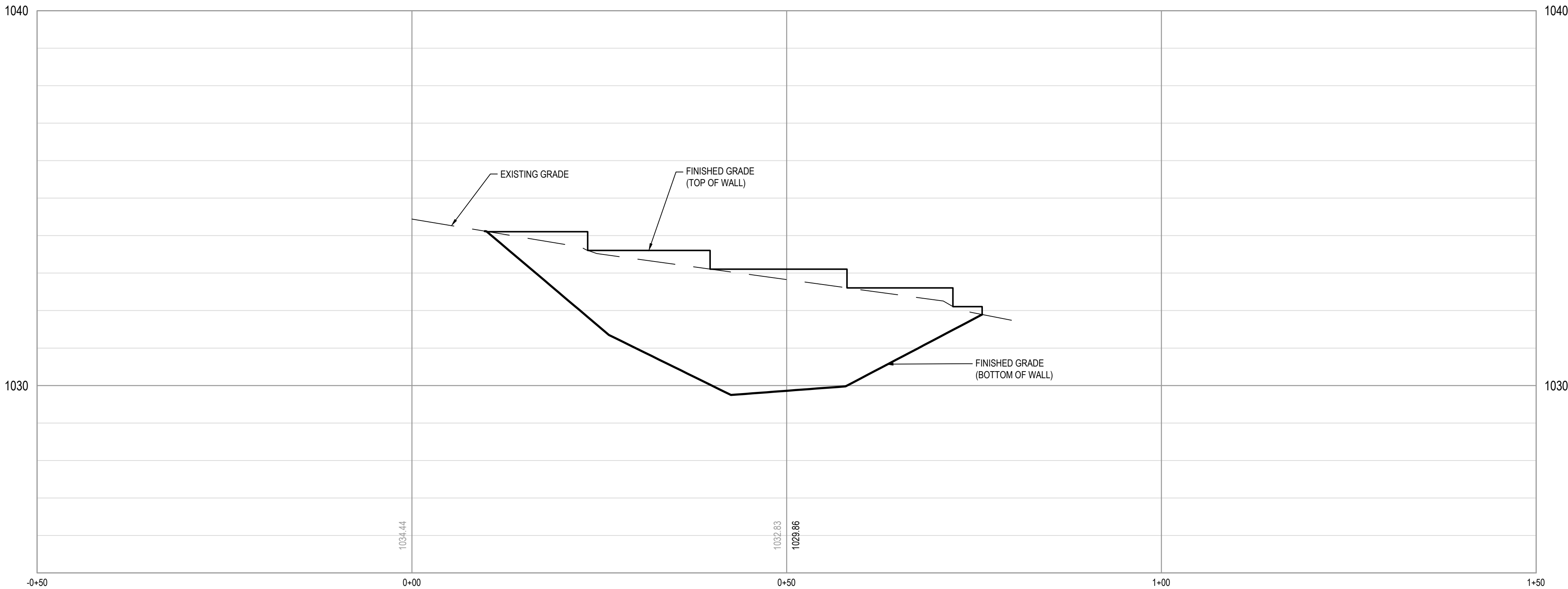
KEYNOTES

1. MODULAR BLOCK WALL. WALL WIDTH AND BATTER TO MEET MANUFACTURES RECOMMENDATIONS (RE: 1/00C-502).



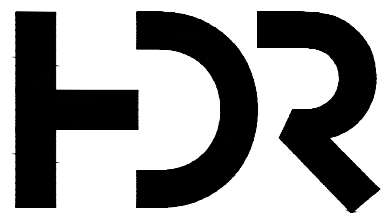
PLAN

1" = 10'



PROFILE

1" = 10'



HDR ENGINEERING, INC. | CA0443AE
10450 HOLMES ROAD, SUITE 600
KANSAS CITY, MO 64131
(816) 360-2600
MO CERTIFICATE OF AUTHORITY #: 000856

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	03/07/2025	FINAL DEVELOPMENT PLAN

PROJECT MANAGER	K. PRINDS
CIVIL	M. WIEBELHAUS
ARCHITECTURAL	ERICA BUTTMAN
MECHANICAL	M. WARRICK
PROJECT NUMBER	10417754

PRELIMINARY
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CITY OF LEE'S SUMMIT, MO
WATER UTILITIES FACILITY &
PARKING LOT EXPANSION

RETAINING WALL PROFILE

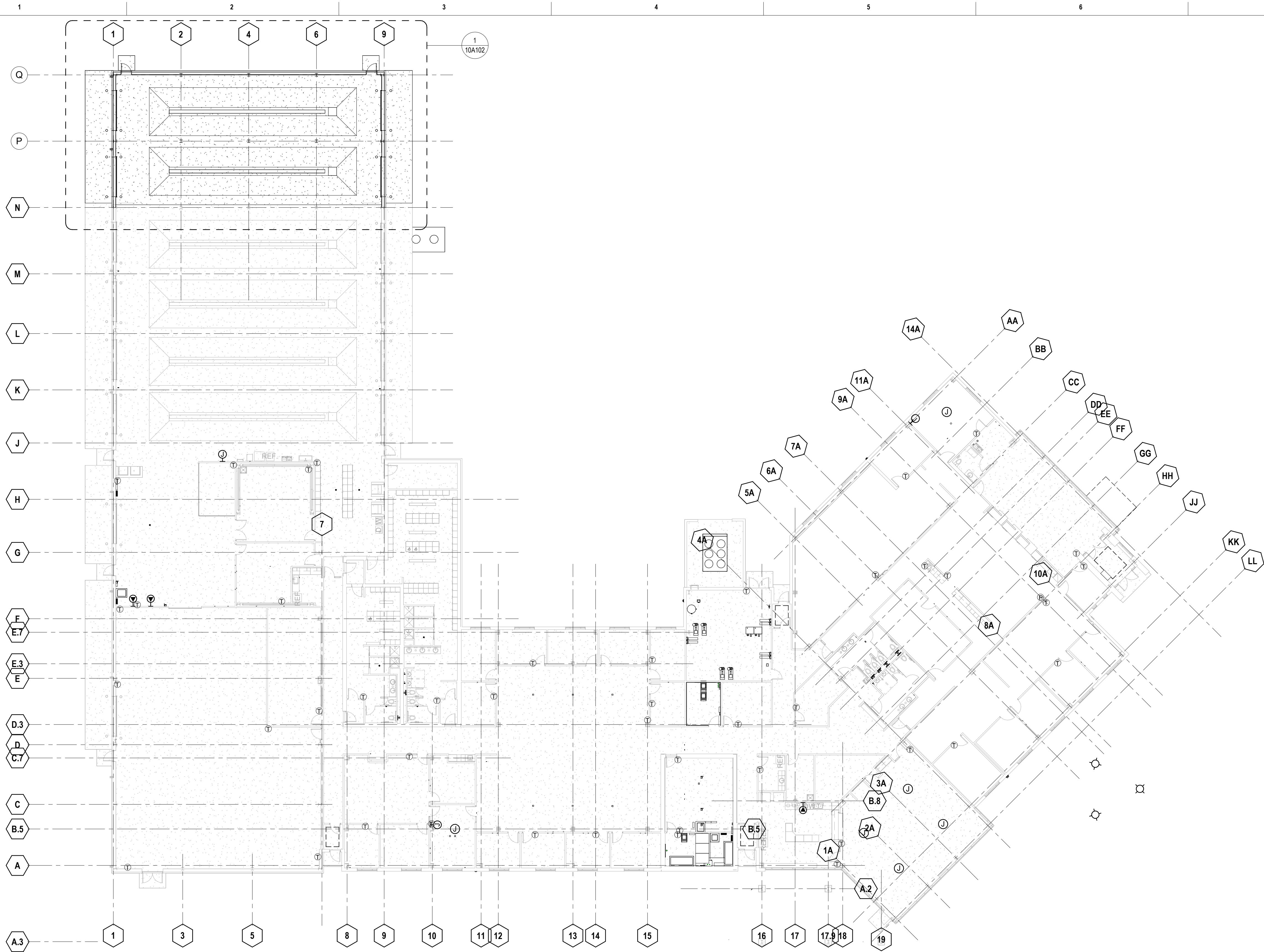
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SCALE 1"=10'



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1 FIRST FLOOR OVERALL PLAN
1/16" = 1'-0"

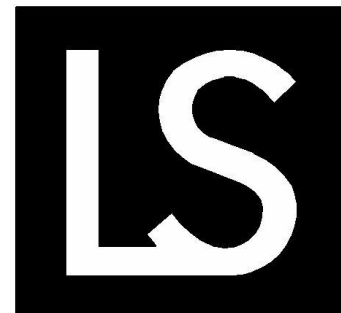


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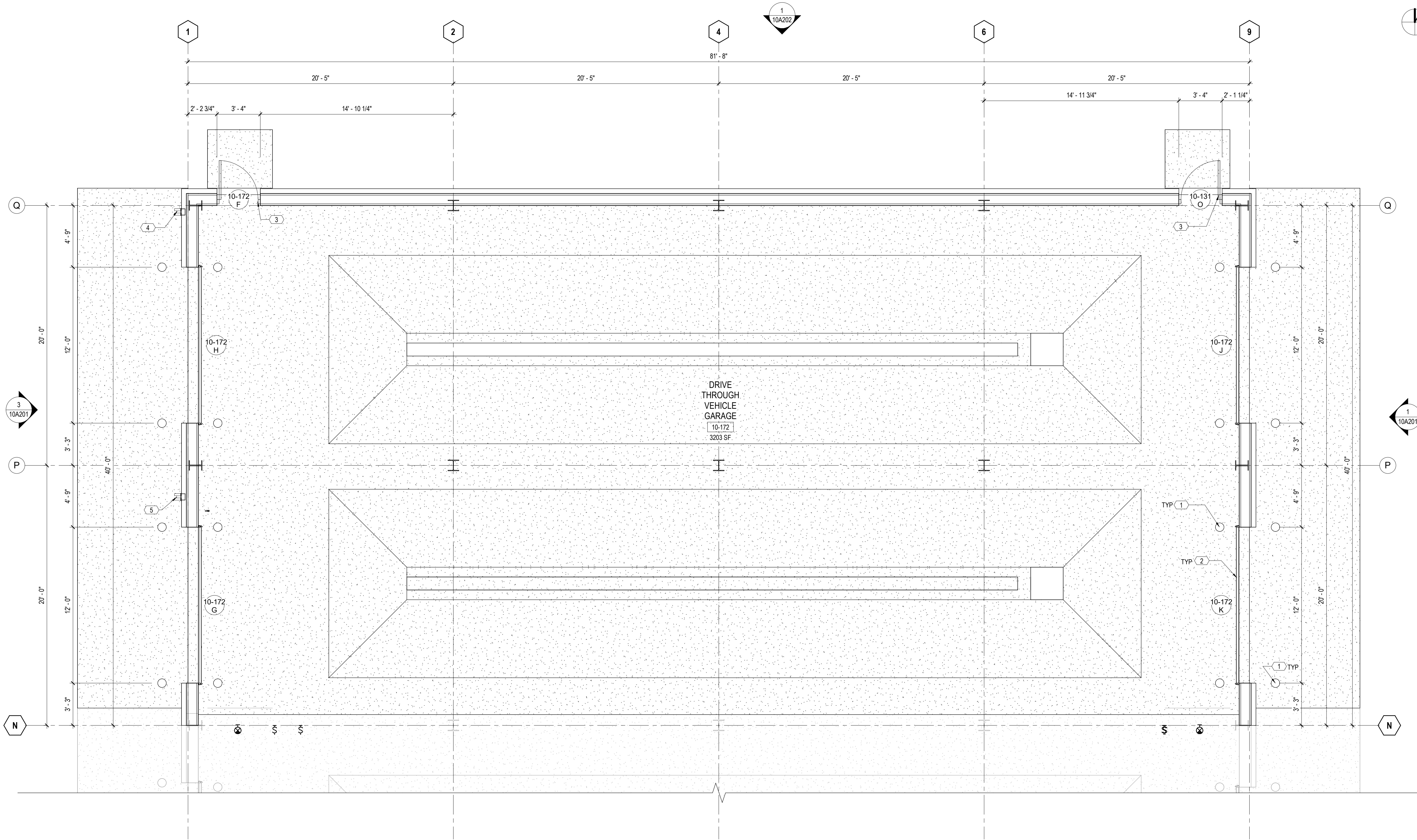
City of Lee's Summit, MO
Water Utilities Facility & Parking Lot
Expansion

ARCHITECTURE OVERALL PLAN

FILE NAME
SCALE 1/16" = 1'-0"
0 1" 2"

SHEET
10A101

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1 FIRST FLOOR - ENLARGED PLAN
1/4" = 1'-0"

GENERAL NOTES

- ALL DIMENSIONS ARE TO EDGE OF OPENING, TO COLUMN CENTERLINE, OR TO GRIDLINE.

KEYNOTES

- BOLLARD. HEIGHT AND SIZE TO MATCH EXISTING.
- OVERHEAD SECTIONAL DOOR. COLOR, SIZE, AND STYLE TO MATCH EXISTING.
- REINSTALL SALVAGED EXISTING DOOR AND FRAME.
- DOWNSPOUT. SIZE, FINISH, AND STYLE TO MATCH EXISTING.
- REINSTALL SALVAGED EXISTING DOWNSPOUT.



ISSUE	DATE	DESCRIPTION
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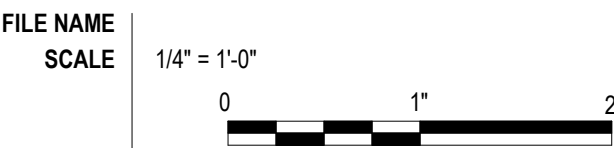
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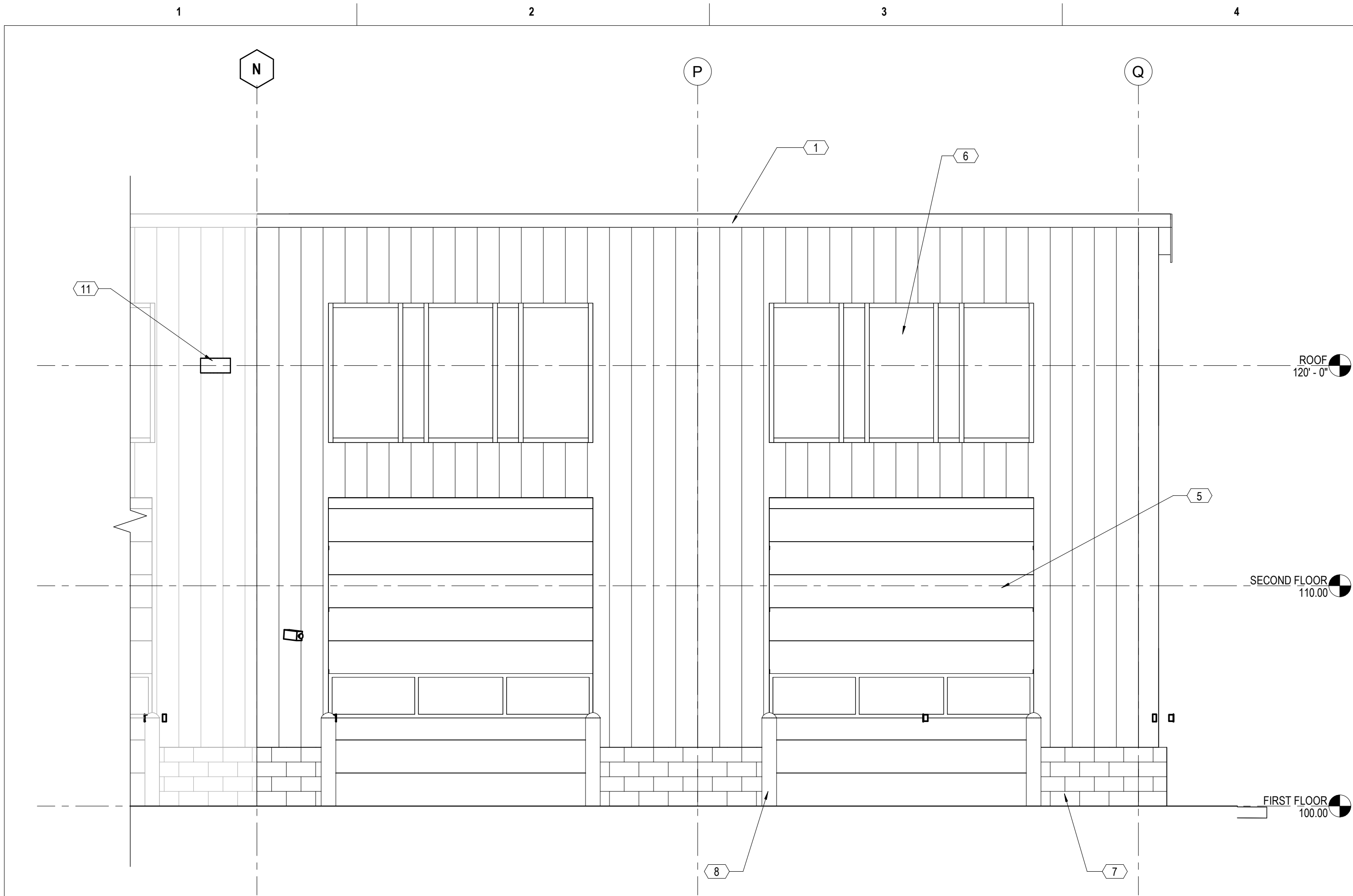
City of Lee's Summit, MO
Water Utilities Facility & Parking Lot
Expansion

ARCHITECTURE PLAN

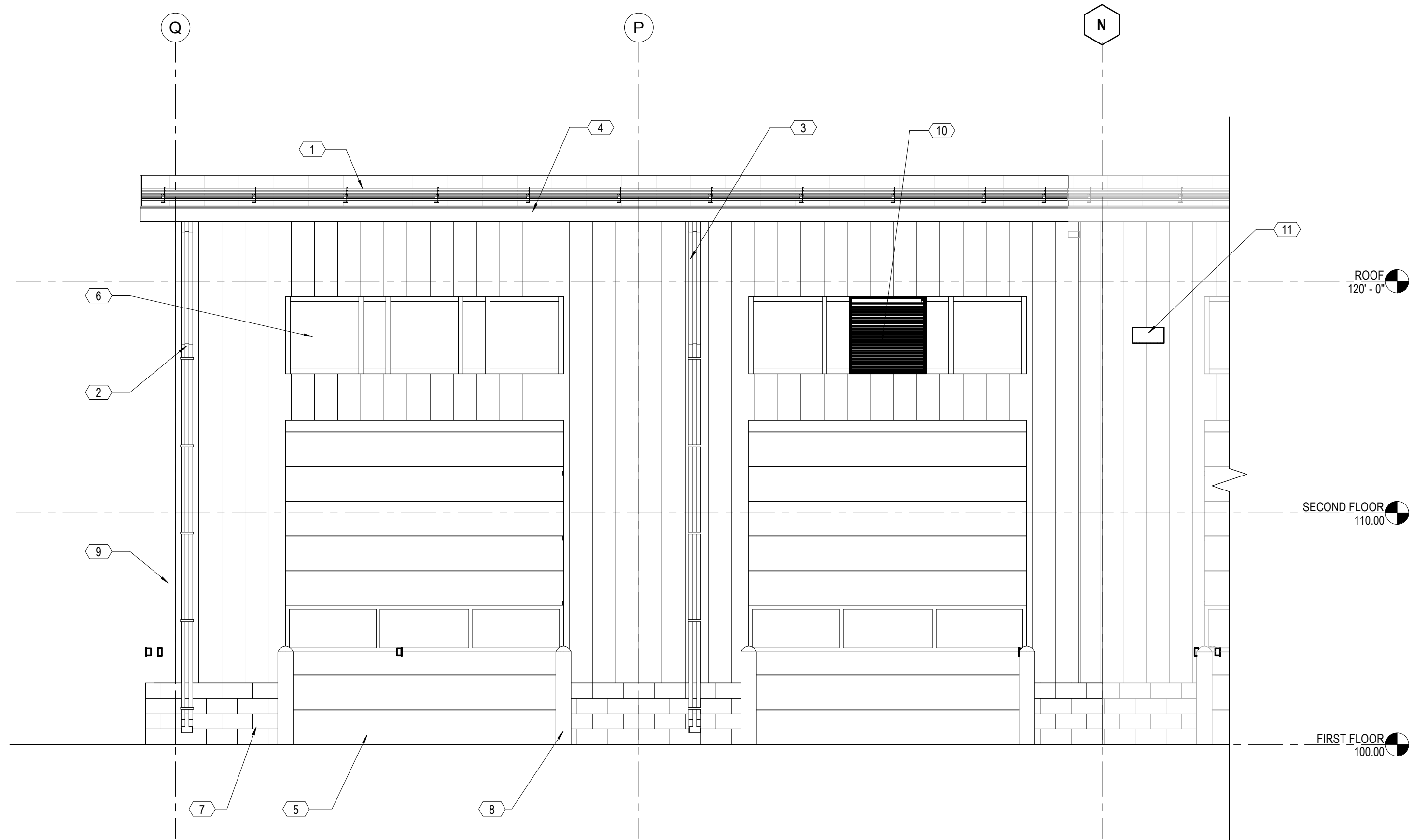


SHEET
10A102

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1 EAST ELEVATION
10A102 1/4" = 1'-0"



3 WEST ELEVATION
10A102 1/4" = 1'-0"

KEYNOTES

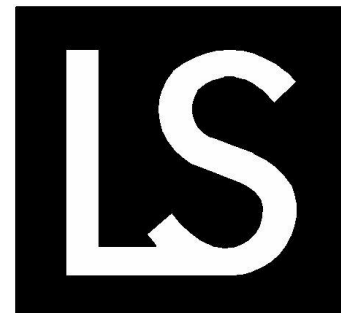
- 1 STANDING SEAM METAL ROOF AND FASCIA. COLOR, PROFILE, AND STYLE TO MATCH EXISTING.
- 2 DOWNSPOUT. SIZE, FINISH, AND STYLE TO MATCH EXISTING.
- 3 REINSTALL SALVAGED EXISTING DOWNSPOUT.
- 4 EXTEND GUTTER. PROFILE AND COLOR TO MATCH EXISTING.
- 5 OVERHEAD SECTIONAL DOOR. COLOR, SIZE, AND STYLE TO MATCH EXISTING.
- 6 TRANSOM WINDOW. FRAME AND SIZE TO MATCH EXISTING.
- 7 SPLIT-FACE CMU WAINSCOT. COLOR AND TYPE TO MATCH EXISTING .
- 8 BOLLARD. HEIGHT AND SIZE TO MATCH EXISTING.
- 9 SIDING. COLOR TO MATCH EXISTING.
- 10 NEW MECHANICAL LOUVER.
- 11 NEW LIGHT FIXTURE.



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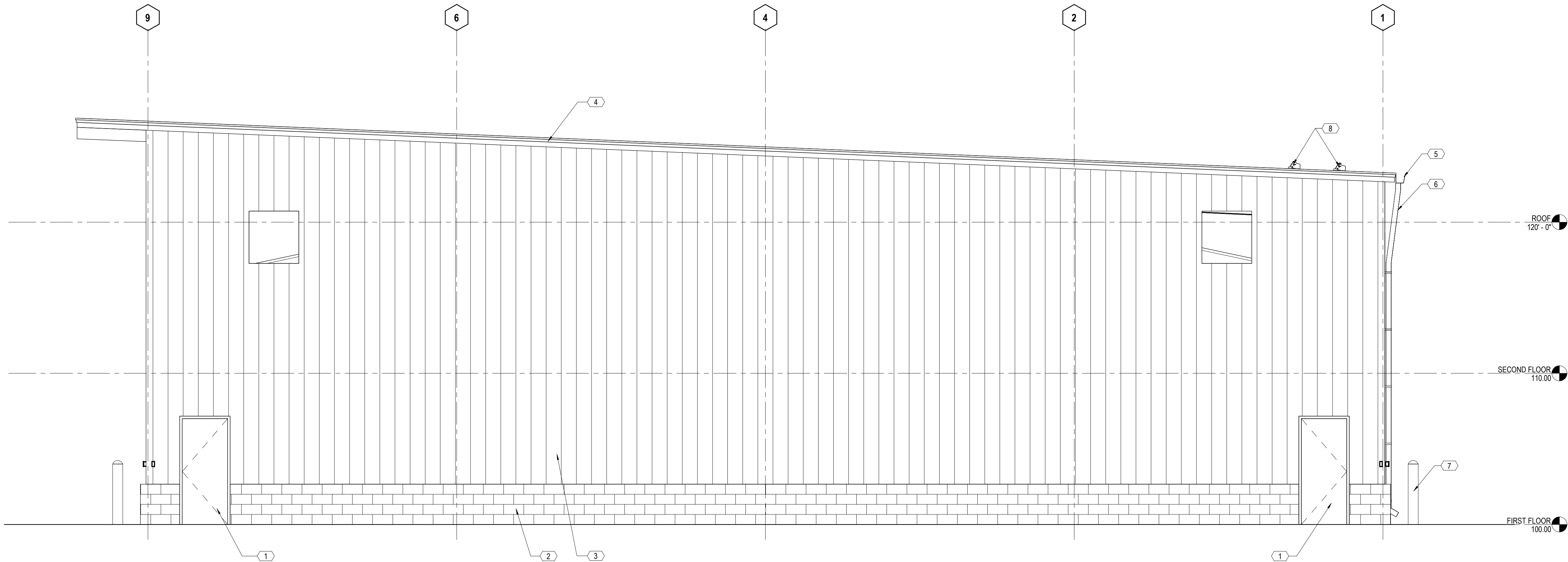
City of Lee's Summit, MO
Water Utilities Facility & Parking Lot
Expansion

ARCHITECTURE EXTERIOR ELEVATIONS

FILE NAME
SCALE 1/4" = 1'-0"
0 1" 2"

SHEET
10A201

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1 NORTH ELEVATION
10A102 1/4" = 1'-0"

KEYNOTES <##>

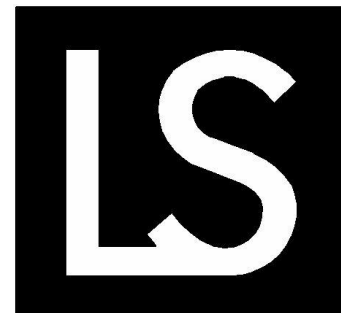
- 1 REMOVE AND SALVAGE EXISTING DOOR AND FRAME.
- 2 SPLIT-FACE CMU WAINSCOT. COLOR AND TYPE TO MATCH EXISTING .
- 3 REMOVE AND SALVAGE EXISTING SIDING AND WALL GIRTS.
- 4 STANDING SEAM METAL ROOF AND FASCIA. COLOR, PROFILE, AND STYLE TO MATCH EXISTING.
- 5 EXTEND GUTTER, PROFILE AND COLOR TO MATCH EXISTING.
- 6 DOWNSPOUT. SIZE, FINISH, AND STYLE TO MATCH EXISTING.
- 7 BOLLARD. HEIGHT AND SIZE TO MATCH EXISTING.
- 8 SNOW RETENTION SYSTEM TO MATCH EXISTING.



ISSUE	DATE	DESCRIPTION
	03/07/2025	FINAL DEVELOPMENT PLAN

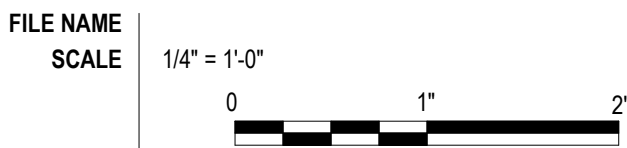
PROJECT MANAGER	K. PRINDS
CIVIL	M. WIEBELHAUS
ARCHITECTURAL	E. BUTTMAN
MECHANICAL	M. WARRICK
PROJECT NUMBER	10417754

PRELIMINARY
NOT FOR
CONSTRUCTION OR
RECORDING



City of Lee's Summit, MO
Water Utilities Facility & Parking Lot
Expansion

ARCHITECTURE EXTERIOR ELEVATIONS



SHEET
10A202